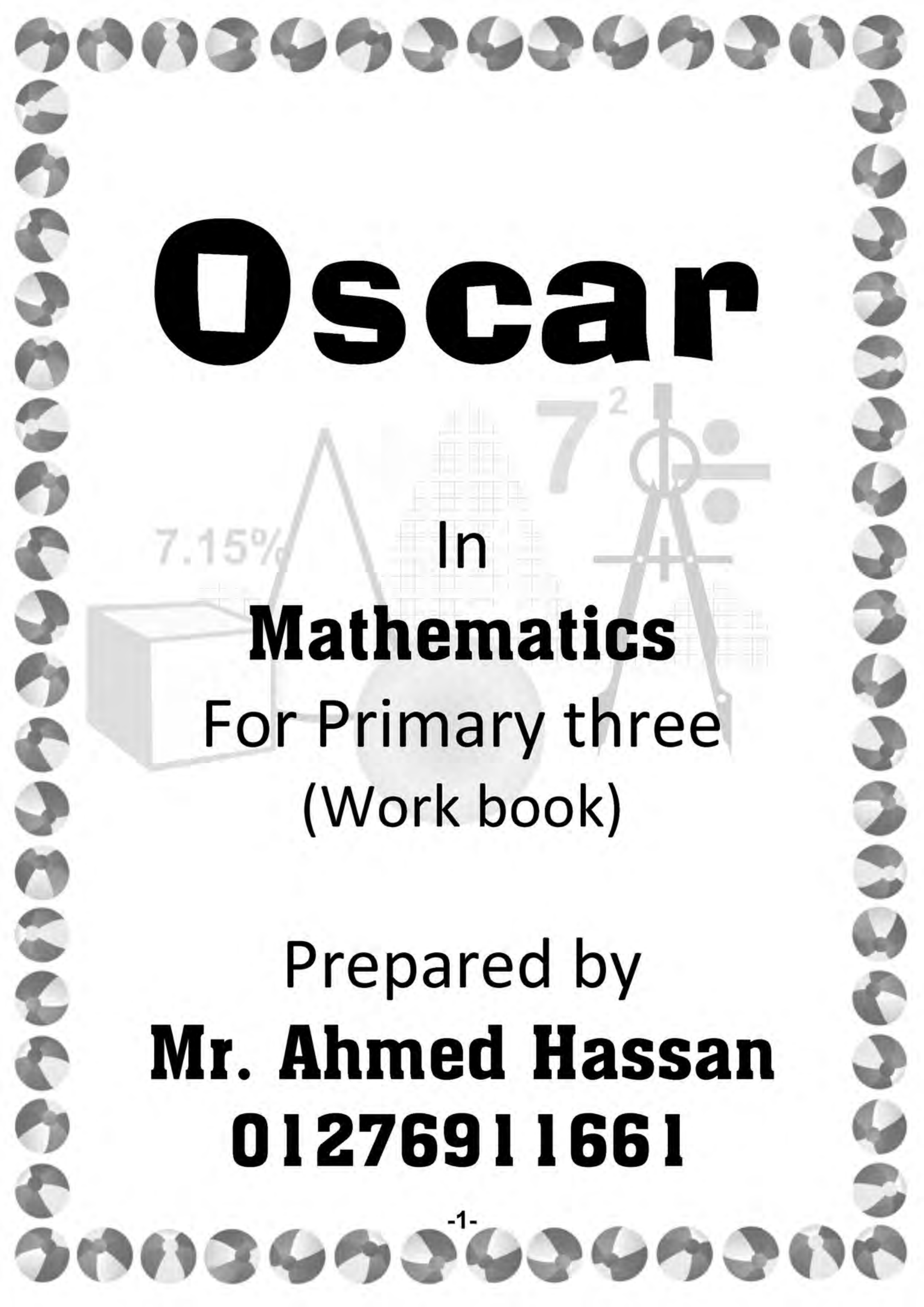


Oscar

In

Mathematics

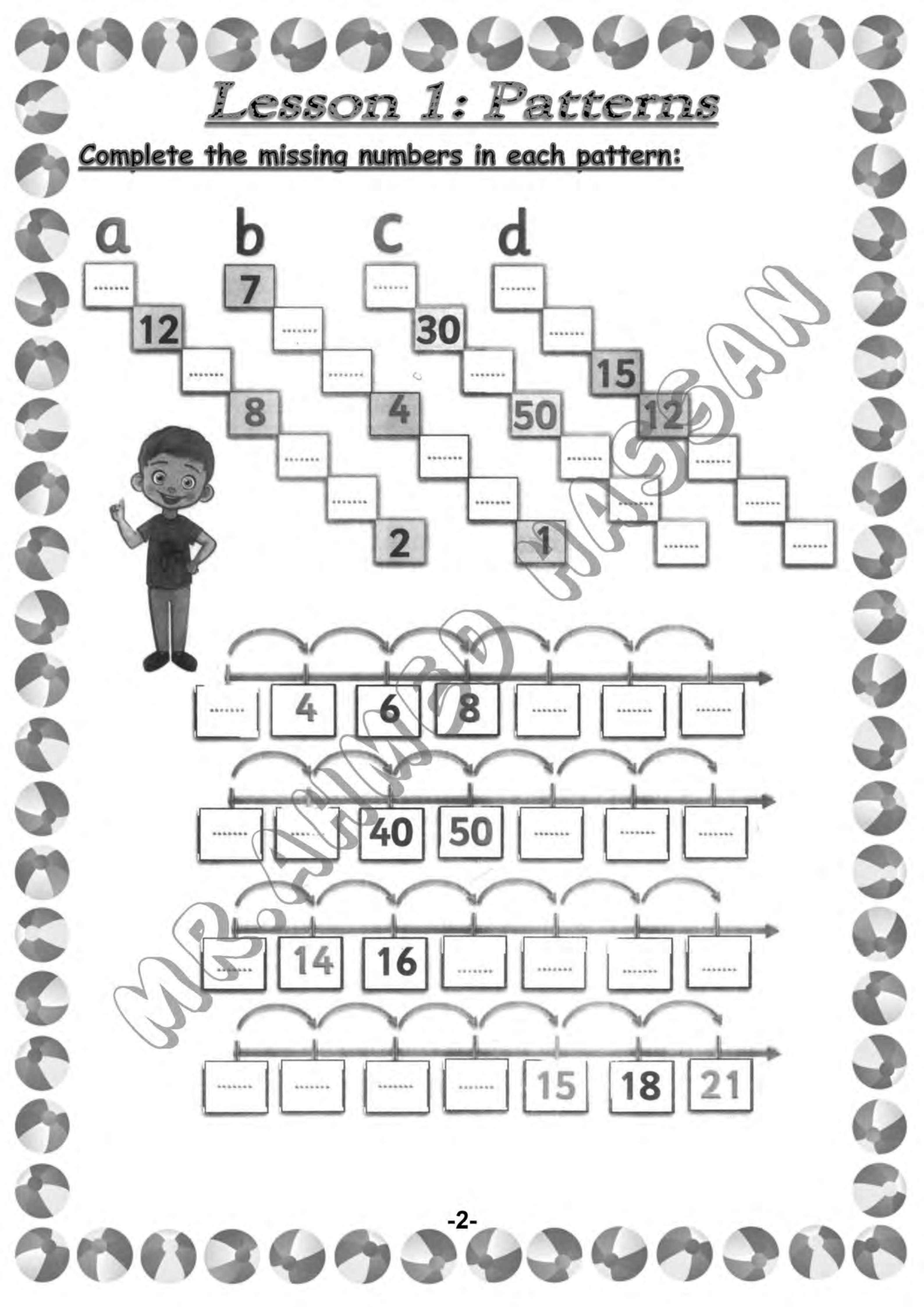
For Primary three

(Work book)

Prepared by

Mr. Ahmed Hassan

01276911661



Lesson 1: Patterns

Complete the missing numbers in each pattern:

a: ……, 12, ……, 8, ……, ……, 2

b: 7, ……, ……, 4, ……, ……, 1

c: ……, 30, ……, 50, ……, ……, ……

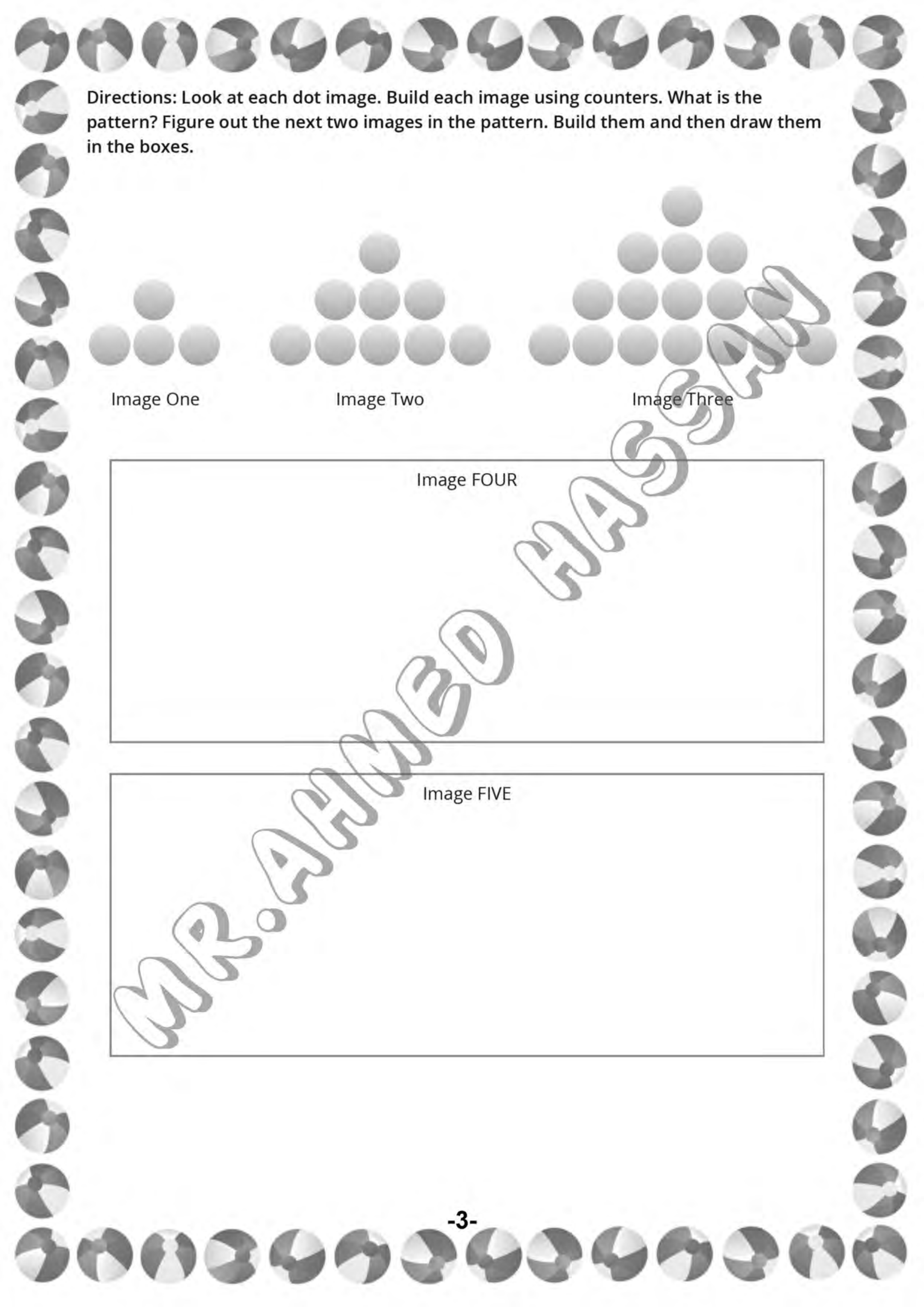
d: ……, ……, 15, 12, ……, ……, ……

……, 4, 6, 8, ……, ……, ……

……, ……, 40, 50, ……, ……, ……

……, 14, 16, ……, ……, ……, ……

……, ……, ……, ……, 15, 18, 21



Directions: Look at each dot image. Build each image using counters. What is the pattern? Figure out the next two images in the pattern. Build them and then draw them in the boxes.

Image One

Image Two

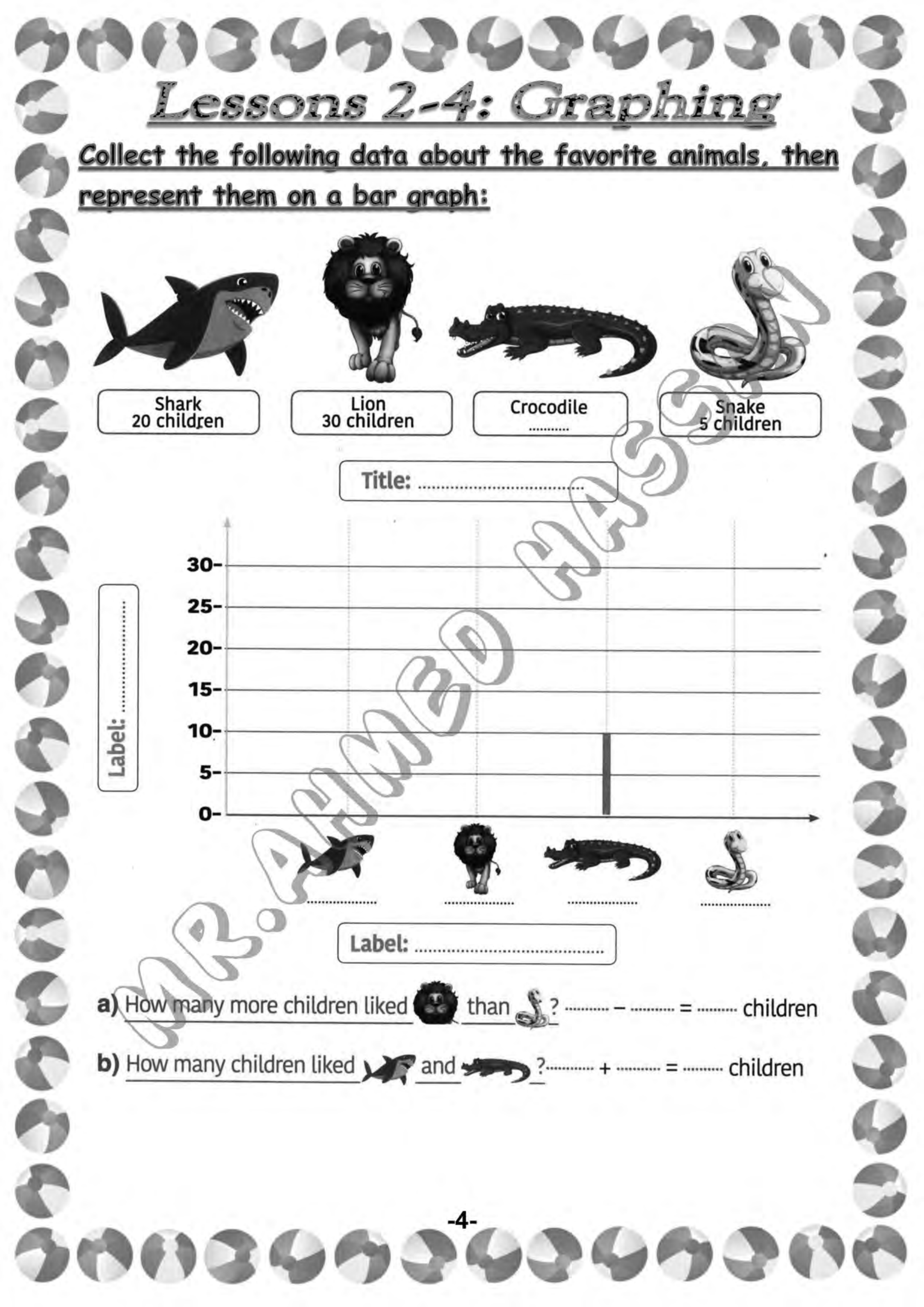
Image Three

Image FOUR

Image FIVE

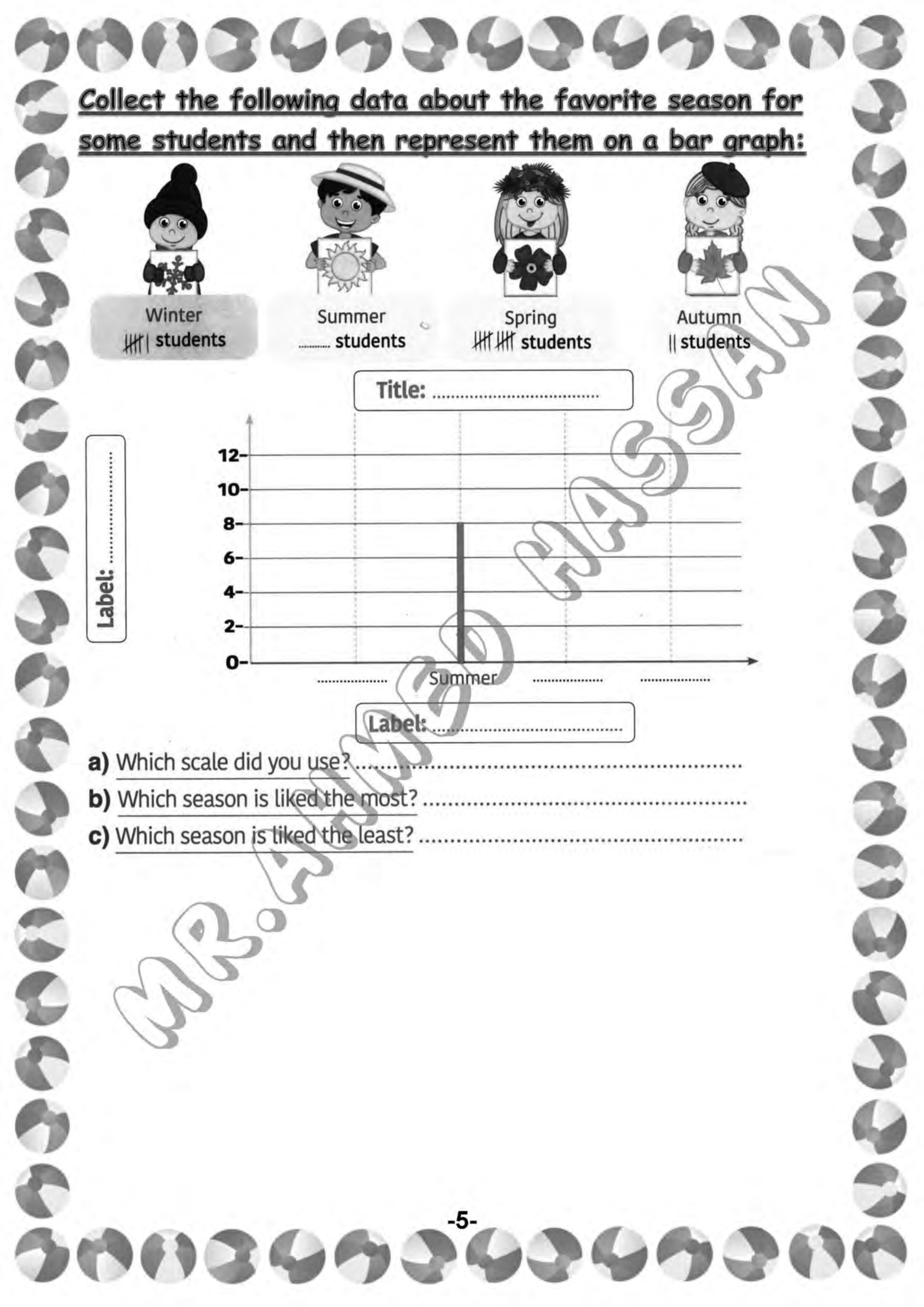
Lessons 2-4: Graphing

Collect the following data about the favorite animals, then represent them on a bar graph:



a) How many more children liked [lion] than [snake]? .... – .... = ... children

b) How many children liked [shark] and [crocodile]? .... + ... = ... children



Collect the following data about the favorite season for some students and then represent them on a bar graph:

a) Which scale did you use? ....

b) Which season is liked the most? ....

c) Which season is liked the least? ....

Form a pictograph about the children's favorite character:

Superman	Tom and Jerry	Rapunzel	Spiderman
....	30 children	....	10 children

Superman	
Tom and Jerry	
Rapunzel	
Spiderman	

Key: Each .... represents .... child.

Tally Chart

Superman	𝍸 𝍸
Tom and Jerry	....
Rapunzel	𝍸 𝍸 𝍸 𝍸
Spiderman	....

- Which scale did you use? ....

Make Picture Graphs

Ben asked his classmates about their favorite kind of TV show. He recorded their responses in a frequency table. Use the data in the table to make a picture graph.

Favorite TV Show	
Type	**Number**
Cartoons	9
Sports	6
Movies	3

Follow the steps to make a picture graph.

Step 1 Write the title at the top of the graph

Step 2 Look at the numbers in the table. Tell how many students each picture represents for the key

Step 3 Draw the correct number of pictures for each type of show.

Cartoons	■ ■ ■
Sports	
Movies	
Key: Each ■ =	

Use your picture graph for 1–4.

1. What title did you give the graph?

____

2. What key did you use?

____

Problem Solving Real World

3. How many pictures would you draw if 12 students chose game shows as their favorite kind of TV show?

____

4. What key would you use if 10 students chose cartoons?

____

5. WRITE ▸ *Math* Describe why it might not be a good idea to use a key where each symbol stands for 1 in a picture graph.

____

____

Share and Show MATH BOARD

Hands On

Matt's school is having a walk-a-thon to raise money for the school library. Matt made a picture graph to show the number of miles some students walked. Make a bar graph of Matt's data. Use a scale of 0–_____, and mark the scale by_____.

School Walk-a-Thon

Sam	👕 👕 👕 👕 👕
Matt	👕 👕 half 👕
Ben	👕
Erica	👕 👕 👕 👕

Key: Each 👕 = 2 miles.

Math Talk — MATHEMATICAL PRACTICES 3

Apply How would the graph have to change if another student, Daniel, walked double the number of miles Erica walked?

Use your bar graph for 1–4.

1. Which student walked the most miles? _______

   Think: Which student's bar is the tallest?

2. How many more miles would Matt have had to walk to equal the number of miles Erica walked? _______

3. How many miles did the students walk? _______

4. Write the number of miles the students walked in order from greatest to least. _______

Make Bar Graphs

Ben asked some friends to name their favorite breakfast food. He recorded their choices in the frequency table at the right.

Favorite Breakfast Food	
Food	Number of Votes
Waffles	8
Cereal	14
Pancakes	12
Oatmeal	4

1. Complete the bar graph by using Ben's data.

Favorite Breakfast Food

Number of Votes: 0, 4, 8, 12, 16

Food: Waffles, Cereal, Pancakes, Oatmeal

Use your bar graph for 2–4.

2. Which food did the most people choose as their favorite breakfast food?

____

3. How many people chose waffles as their favorite breakfast food?

____

4. Suppose 6 people chose oatmeal as their favorite breakfast food. How would you change the bar graph?

____

5. **WRITE** *Math* Have students use the data on page 116 and explain how to draw a bar for a player named Eric who scored 20 points.

____

Use and Make Line Plots

Use the data in the table to make a line plot.

How Many Shirts Were Sold at Each Price?	
Price	Number Sold
$11	1
$12	4
$13	6
$14	4
$15	0
$16	2

$11 $12 $13 $14 $15 $16

How Many Shirts Were Sold at Each Price?

1. How many shirts sold for $12?

   4 shirts

2. How many shirts were sold for $13 or more?

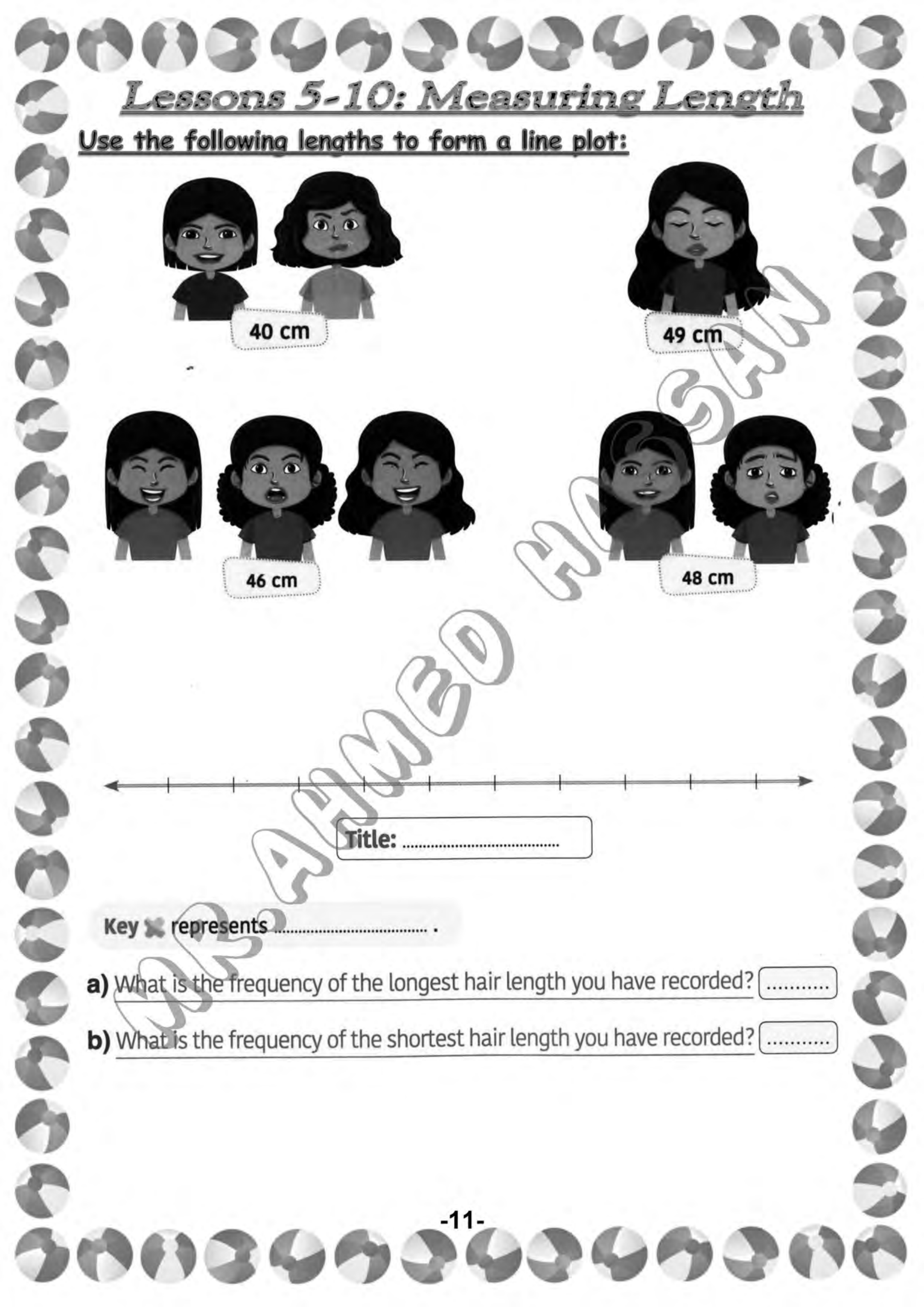
Problem Solving Real World

Use the line plot above for 3–4.

3. Were more shirts sold for less than $13 or more than $13? **Explain.**

4. Is there any price for which there are no data? **Explain.**

5. WRITE Math Have students write and solve another problem using the data in the Daily High Temperatures line plot on page 128.



Lessons 5-10: Measuring Length

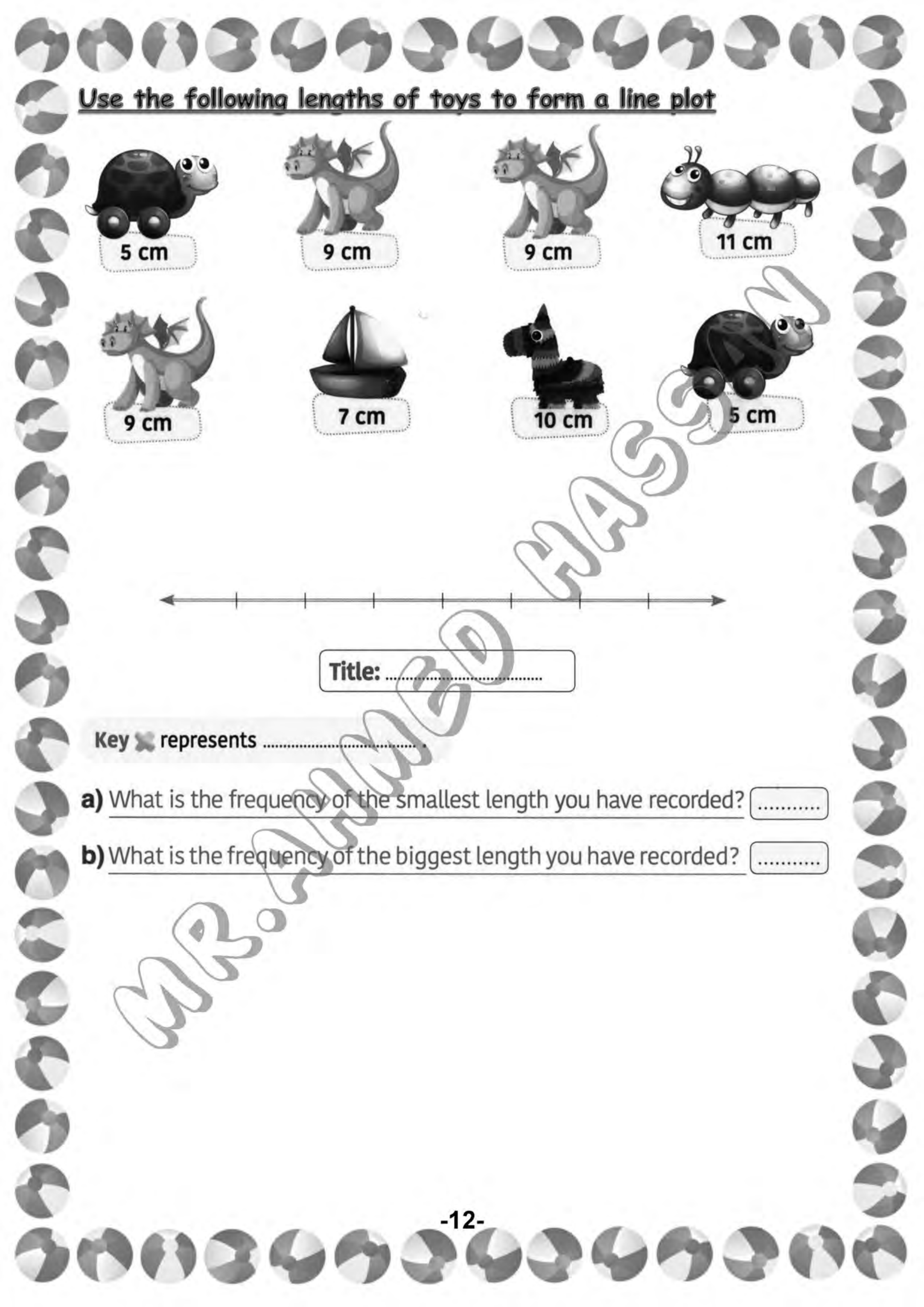
Use the following lengths to form a line plot:

Title: ....

Key ✖ represents ....

a) What is the frequency of the longest hair length you have recorded? ....

b) What is the frequency of the shortest hair length you have recorded? ....



Use the following lengths of toys to form a line plot

a) What is the frequency of the smallest length you have recorded? ....

b) What is the frequency of the biggest length you have recorded? ....



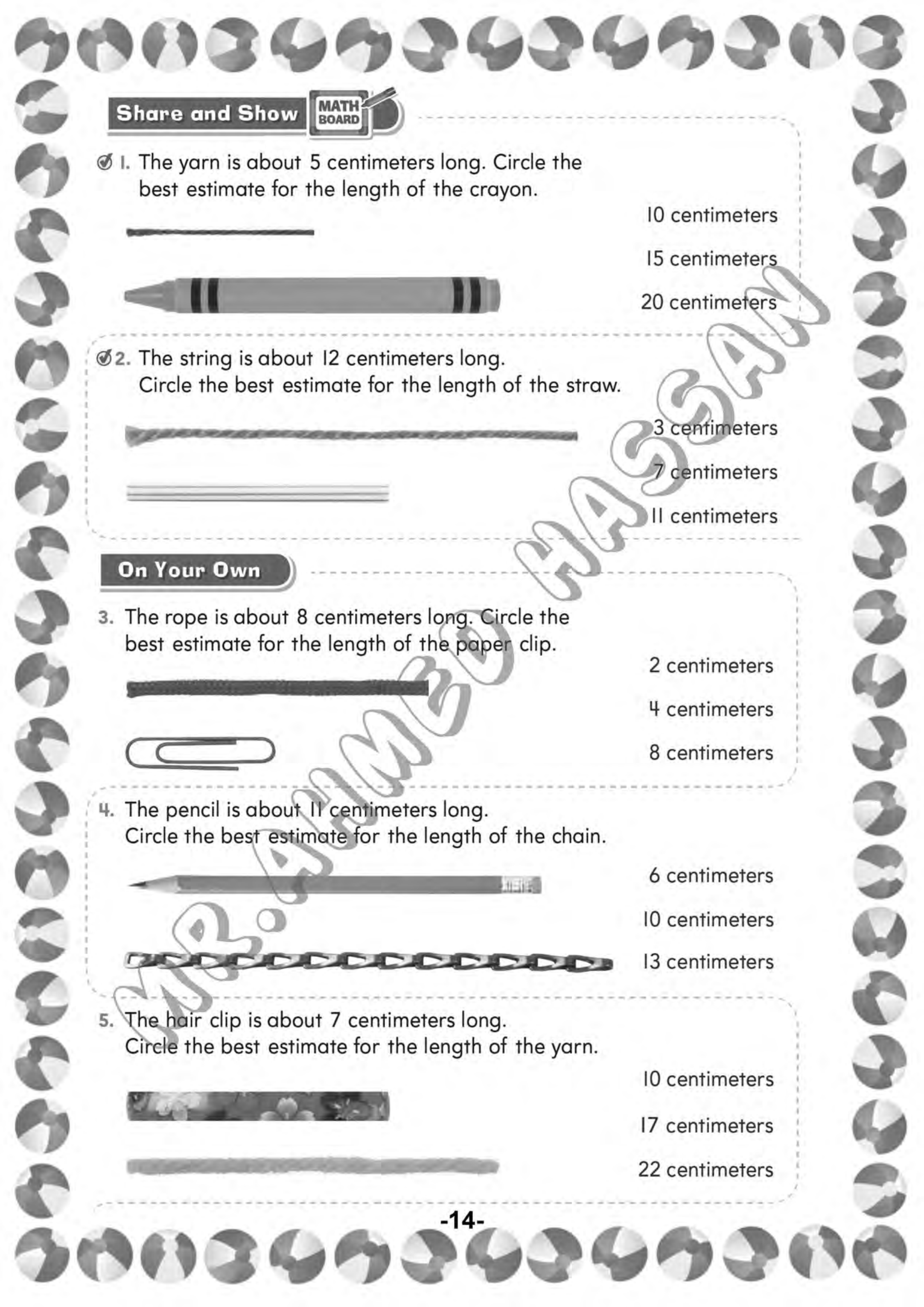
Measure the length of objects in (cm), then converts the length in (mm):

a) .... cm .... mm

b) .... cm .... mm

c) .... cm .... mm

d) .... cm .... mm



Share and Show MATH BOARD

1. The yarn is about 5 centimeters long. Circle the best estimate for the length of the crayon.

10 centimeters

15 centimeters

20 centimeters

2. The string is about 12 centimeters long. Circle the best estimate for the length of the straw.

3 centimeters

7 centimeters

11 centimeters

On Your Own

3. The rope is about 8 centimeters long. Circle the best estimate for the length of the paper clip.

2 centimeters

4 centimeters

8 centimeters

4. The pencil is about 11 centimeters long. Circle the best estimate for the length of the chain.

6 centimeters

10 centimeters

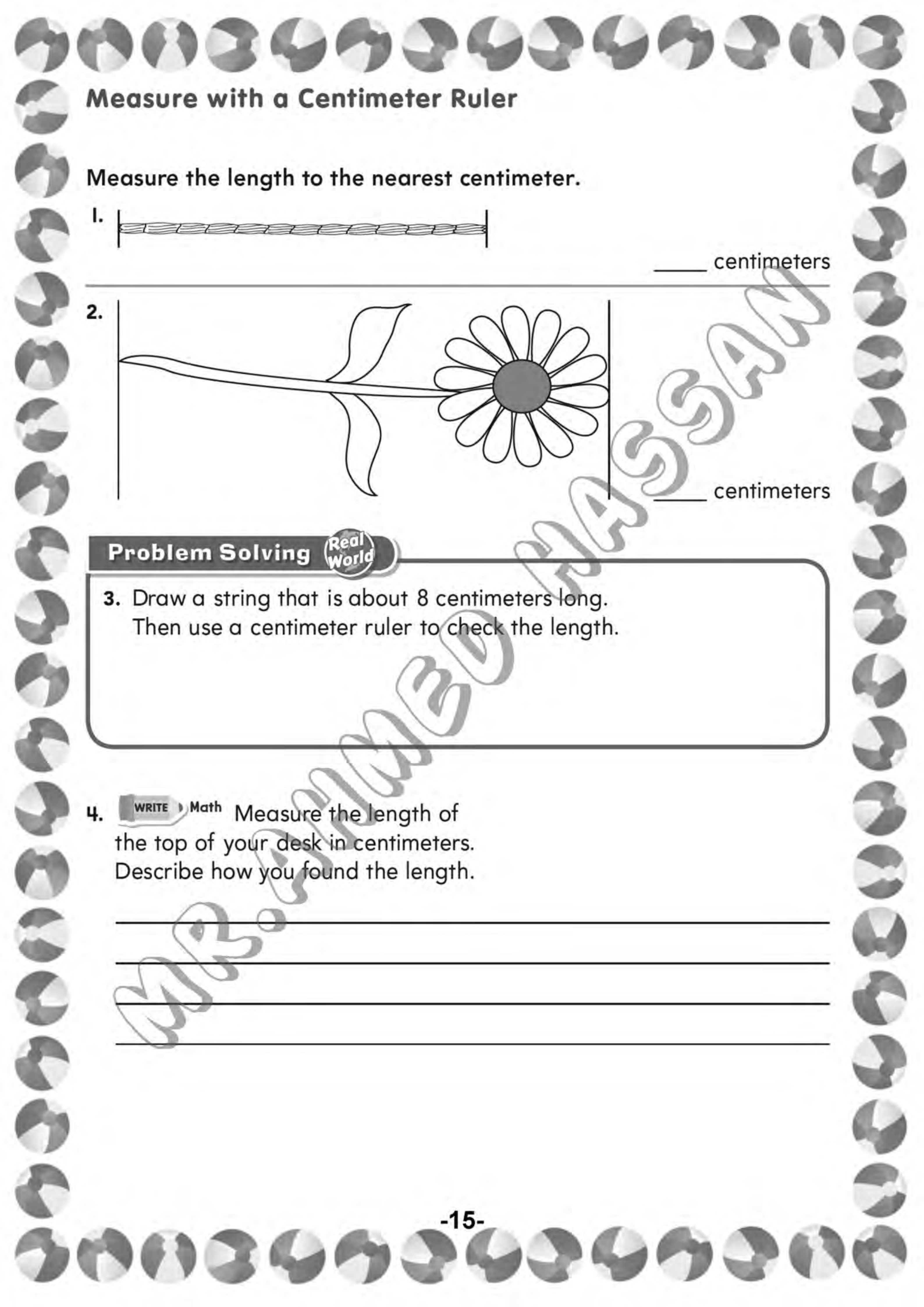
13 centimeters

5. The hair clip is about 7 centimeters long. Circle the best estimate for the length of the yarn.

10 centimeters

17 centimeters

22 centimeters



Measure with a Centimeter Ruler

Measure the length to the nearest centimeter.

1\.

_____ centimeters

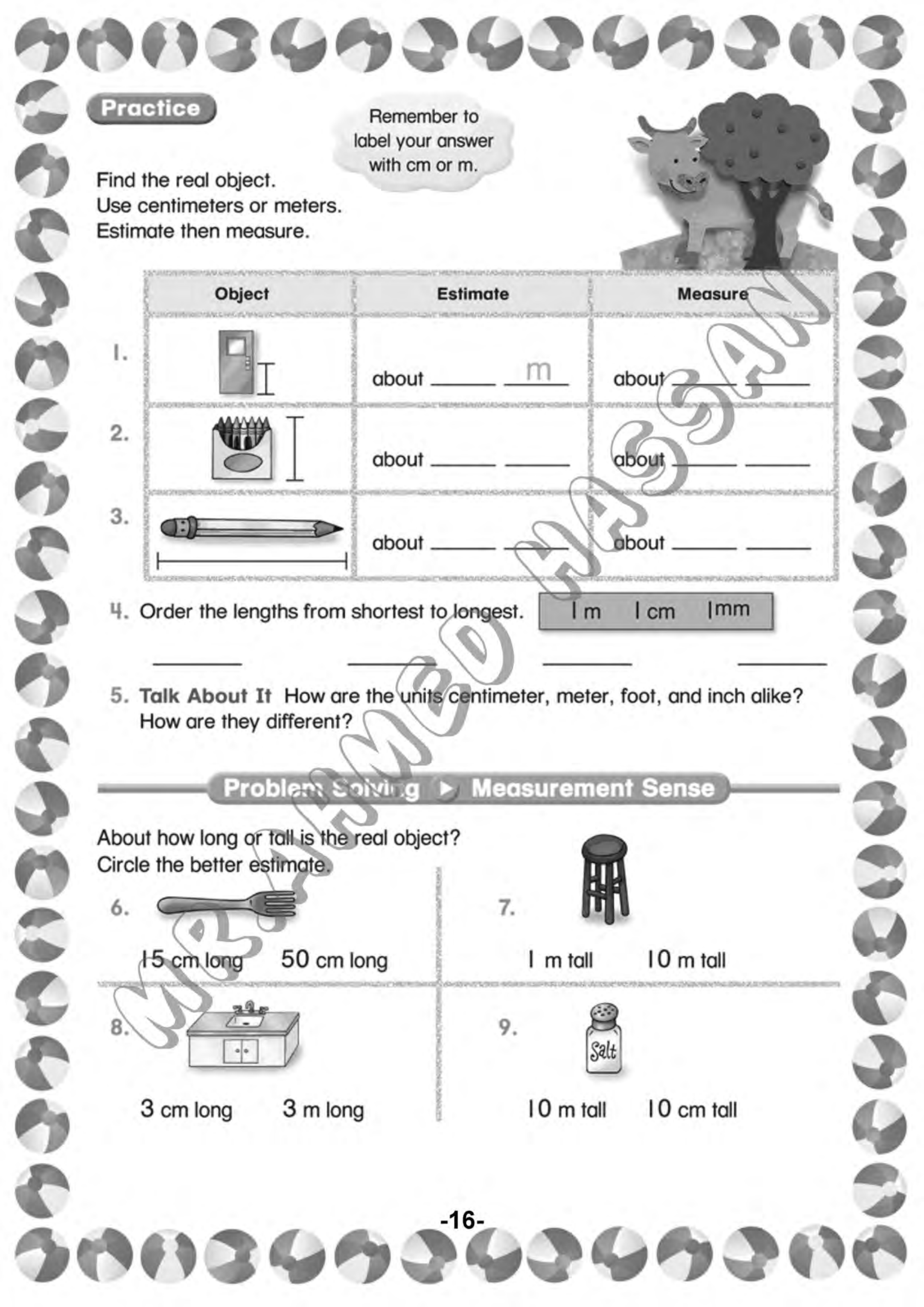
2\.

_____ centimeters

Problem Solving Real World

3\. Draw a string that is about 8 centimeters long.
Then use a centimeter ruler to check the length.

4\. WRITE Math Measure the length of the top of your desk in centimeters. Describe how you found the length.



Practice

Remember to label your answer with cm or m.

Find the real object.
Use centimeters or meters.
Estimate then measure.

	Object	Estimate	Measure
1.	(door)	about ______ m	about ______ ______
2.	(crayon box)	about ______ ______	about ______ ______
3.	(pencil)	about ______ ______	about ______ ______

4. Order the lengths from shortest to longest. | I m | I cm | Imm |

______ ______ ______ ______

5. **Talk About It** How are the units centimeter, meter, foot, and inch alike? How are they different?

Problem Solving ▶ Measurement Sense

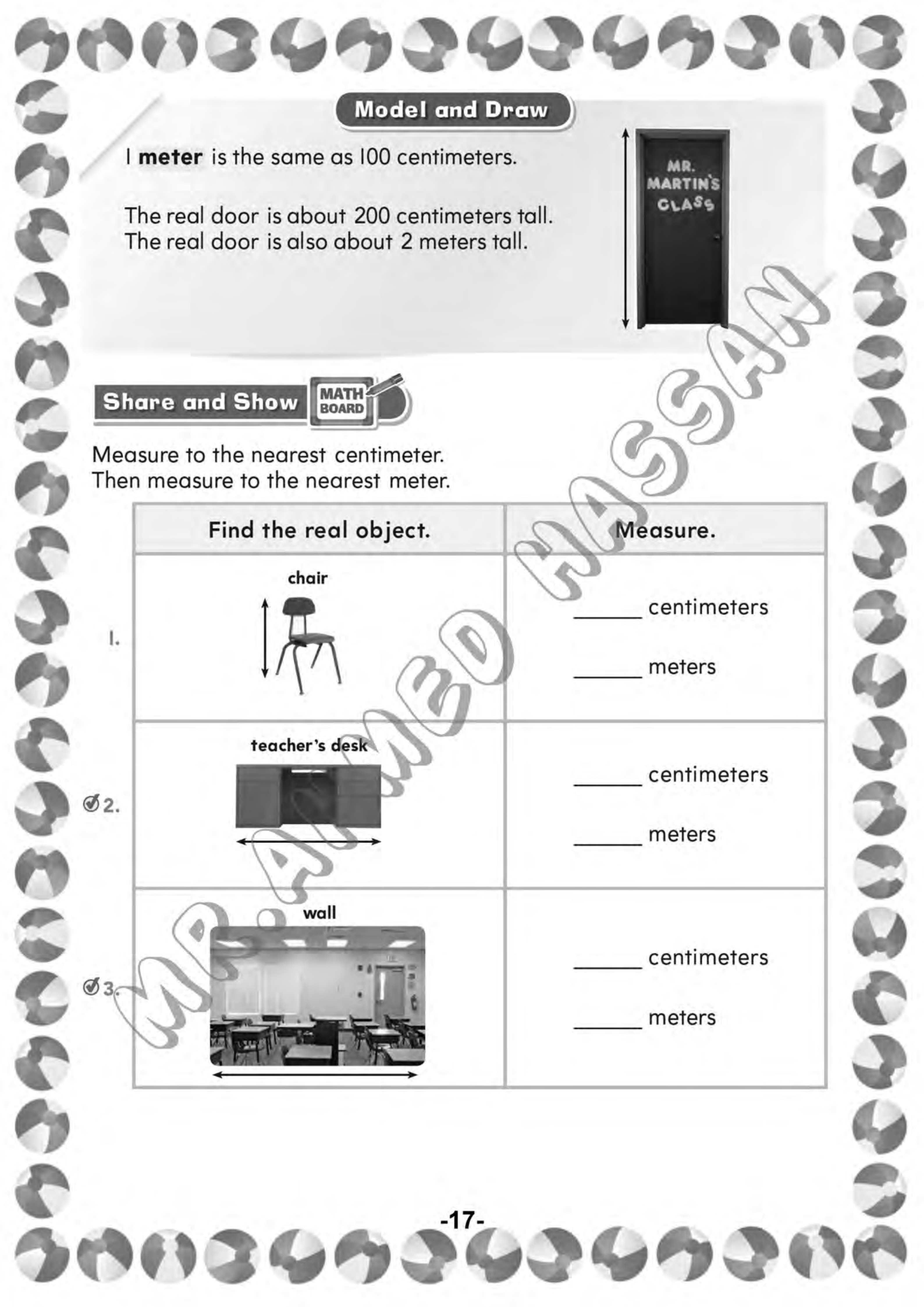
About how long or tall is the real object?
Circle the better estimate.

6. 15 cm long 50 cm long

7. I m tall 10 m tall

8. 3 cm long 3 m long

9. 10 m tall 10 cm tall



Model and Draw

1 **meter** is the same as 100 centimeters.

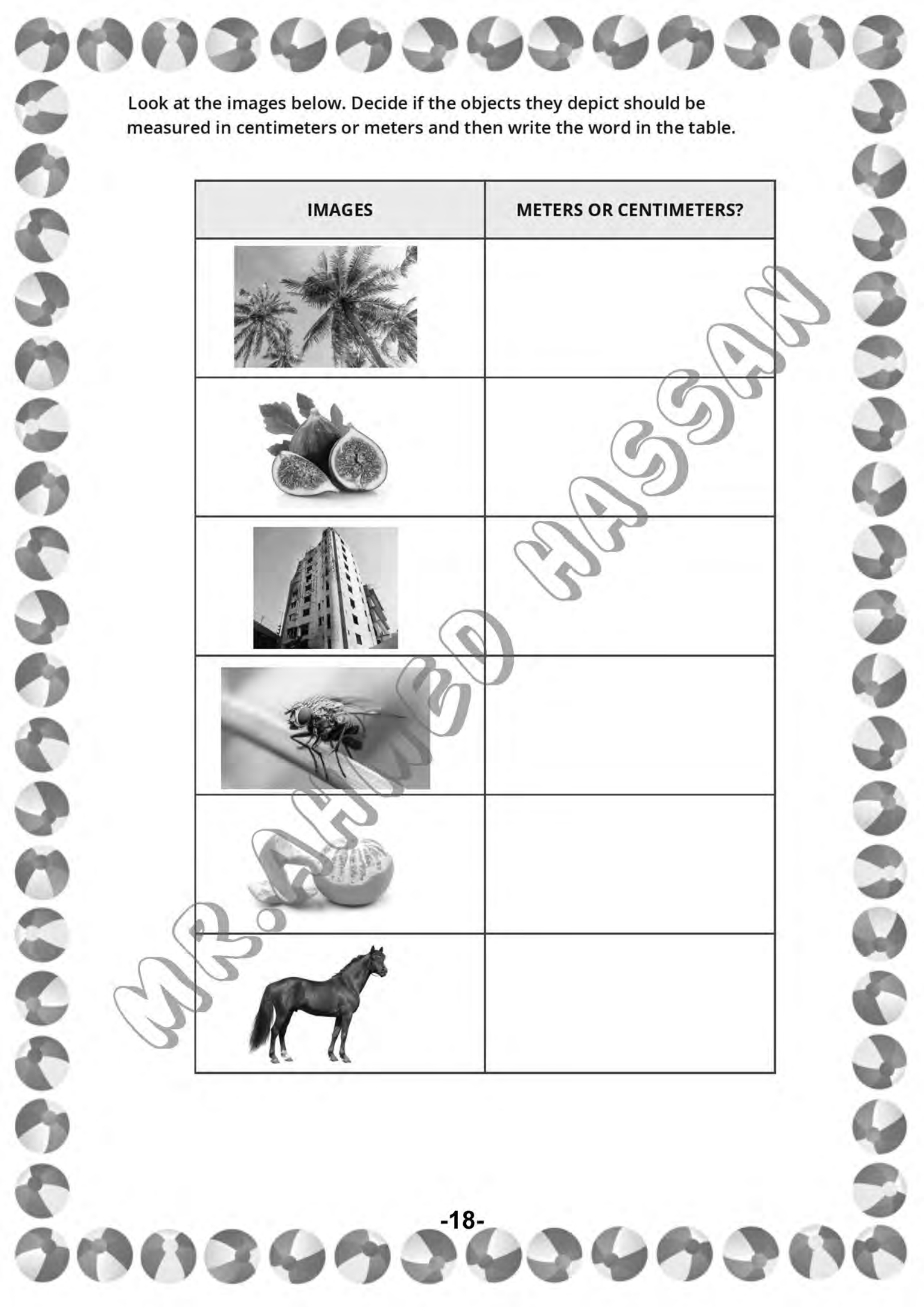
The real door is about 200 centimeters tall.
The real door is also about 2 meters tall.

Share and Show

MATH BOARD

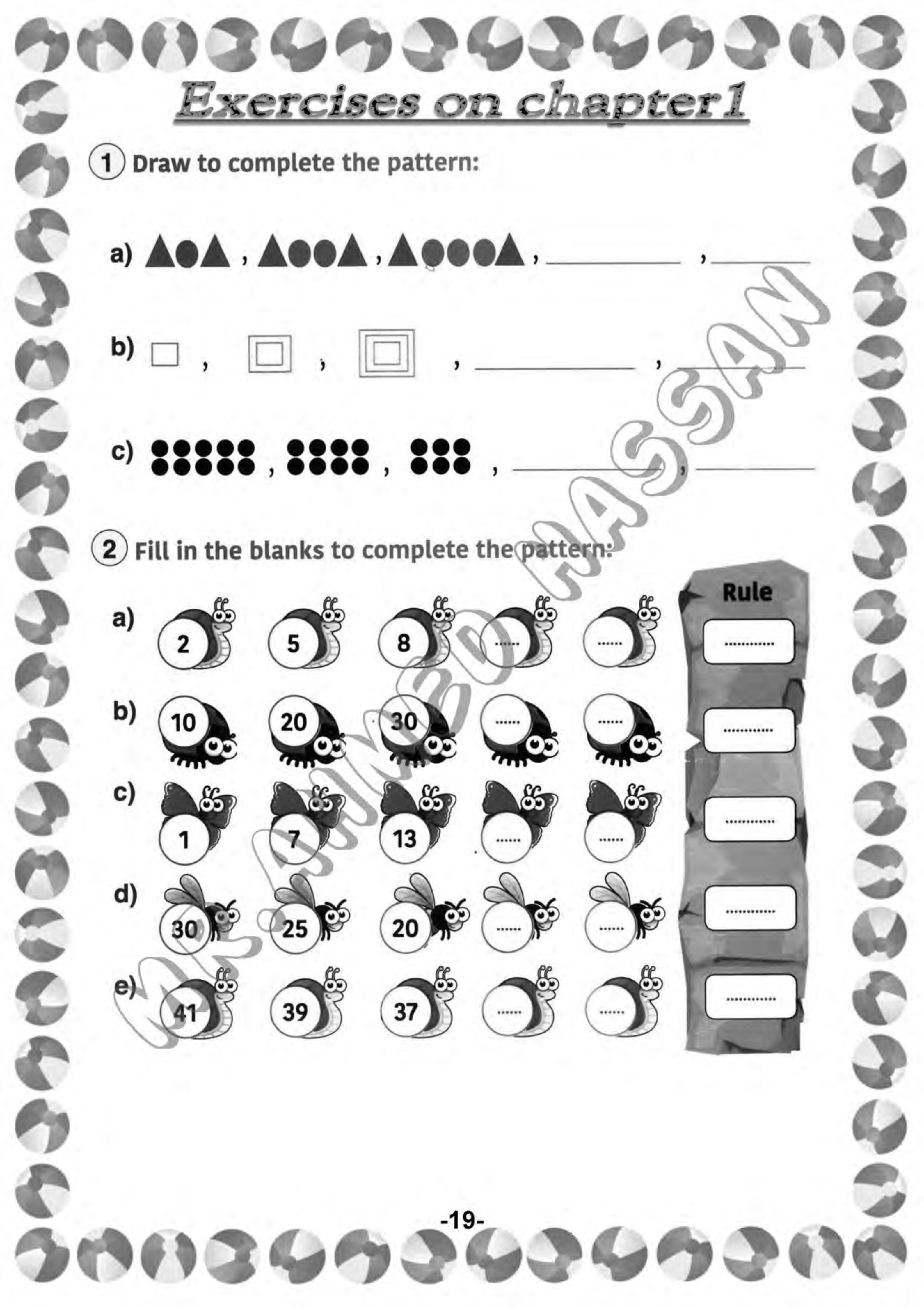
Measure to the nearest centimeter.
Then measure to the nearest meter.

	Find the real object.	Measure.
1.	chair	______ centimeters ______ meters
2.	teacher's desk	______ centimeters ______ meters
3.	wall	______ centimeters ______ meters



Look at the images below. Decide if the objects they depict should be measured in centimeters or meters and then write the word in the table.

IMAGES	METERS OR CENTIMETERS?



Exercises on chapter1

1 Draw to complete the pattern:

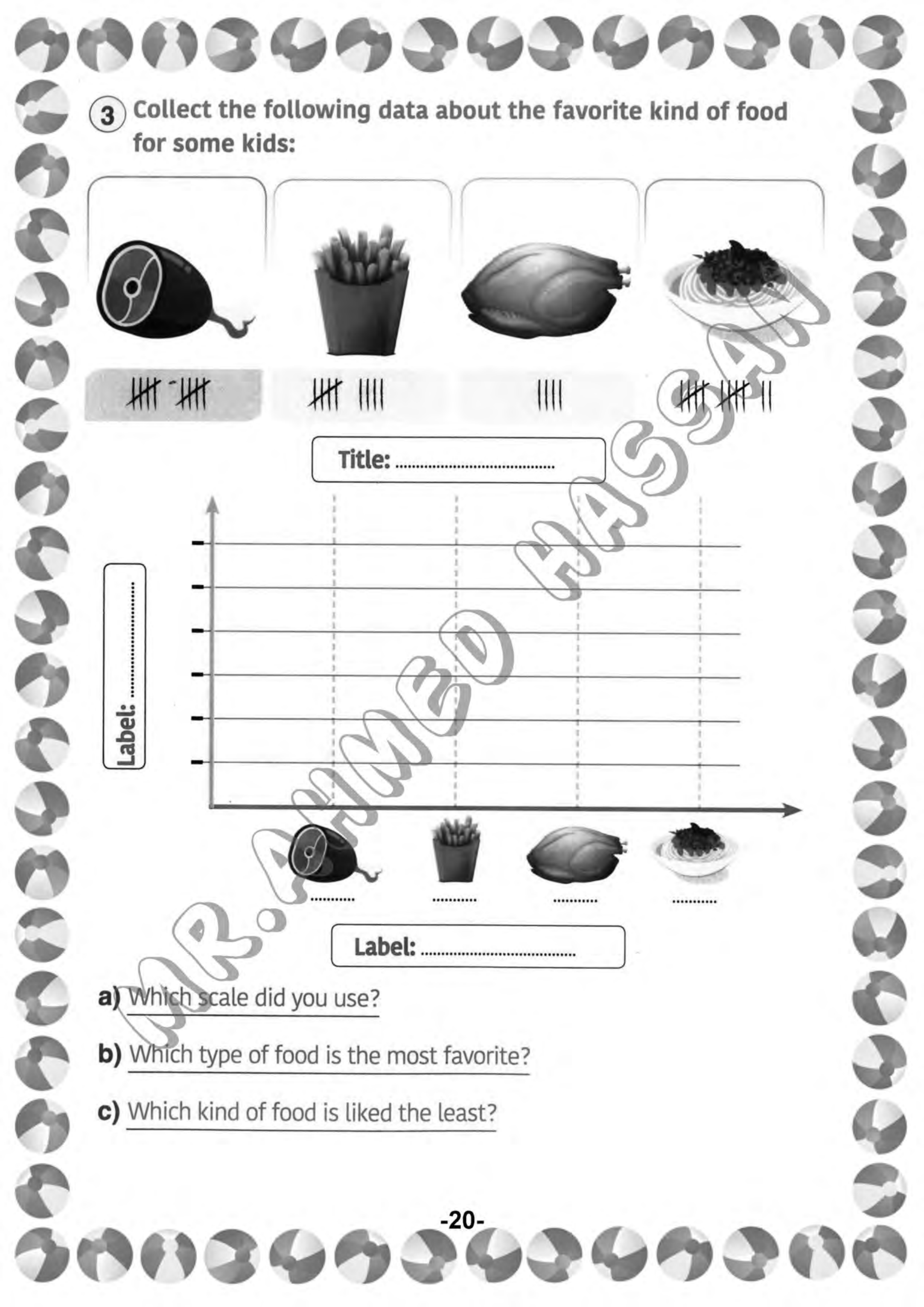
a) ▲●▲ , ▲●●▲ , ▲●●●▲ , ________ , ________

b) □ , ▣ , ▣ , ________ , ________

c) ●●●●● ●●●●● , ●●●● ●●●● , ●●● ●●● , ________ , ________

2 Fill in the blanks to complete the pattern:

						Rule
a)	2	5	8	......	......	....
b)	10	20	30	......	......	....
c)	1	7	13	......	......	....
d)	30	25	20	......	......	....
e)	41	39	37	......	......	....



3 **Collect the following data about the favorite kind of food for some kids:**

Meat	Fries	Chicken	Spaghetti
卌 卌	卌 IIII	IIII	卌 卌 II

Title: ....

Label: ....

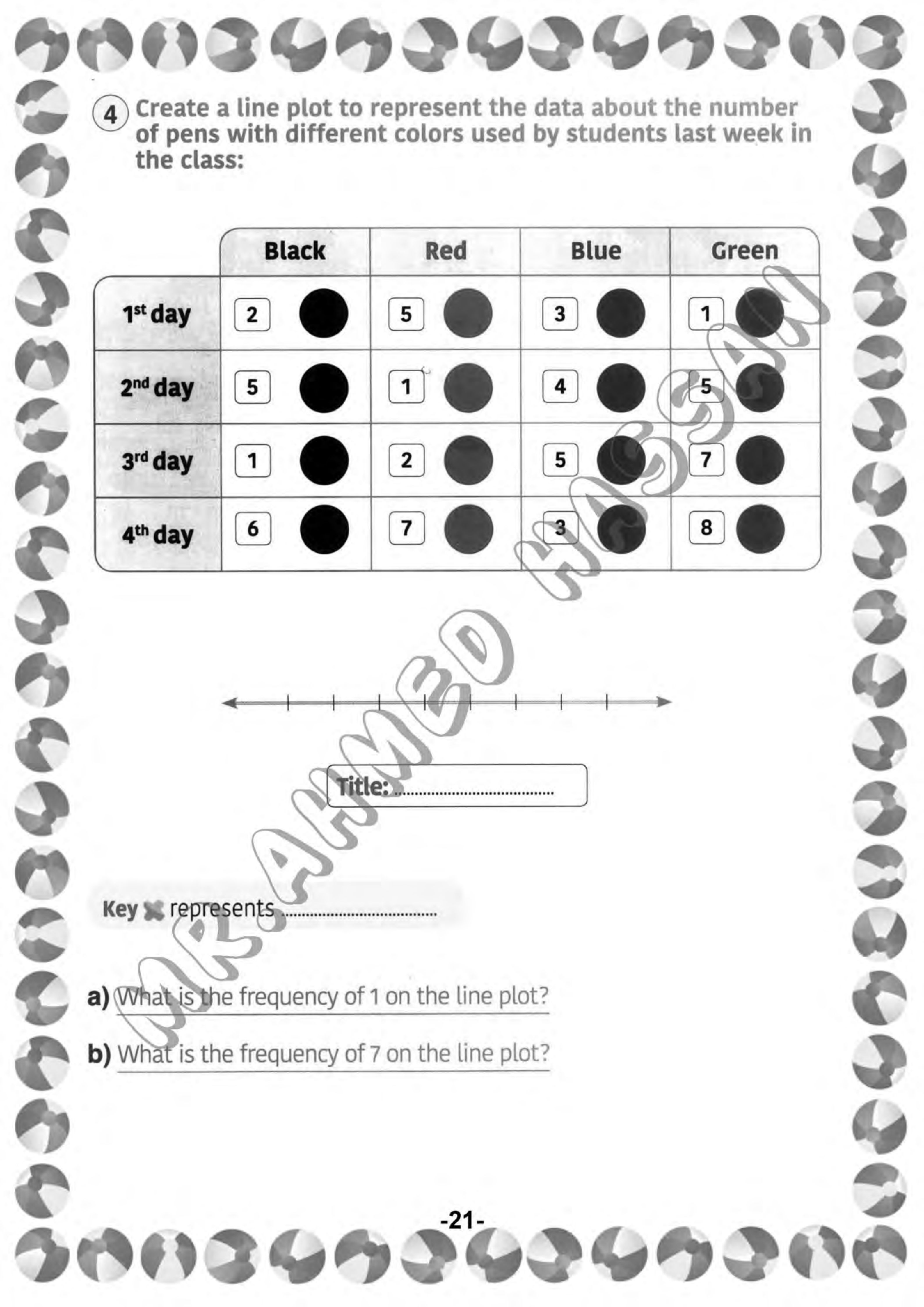
....

Label: ....

a) Which scale did you use?

b) Which type of food is the most favorite?

c) Which kind of food is liked the least?



4) **Create a line plot to represent the data about the number of pens with different colors used by students last week in the class:**

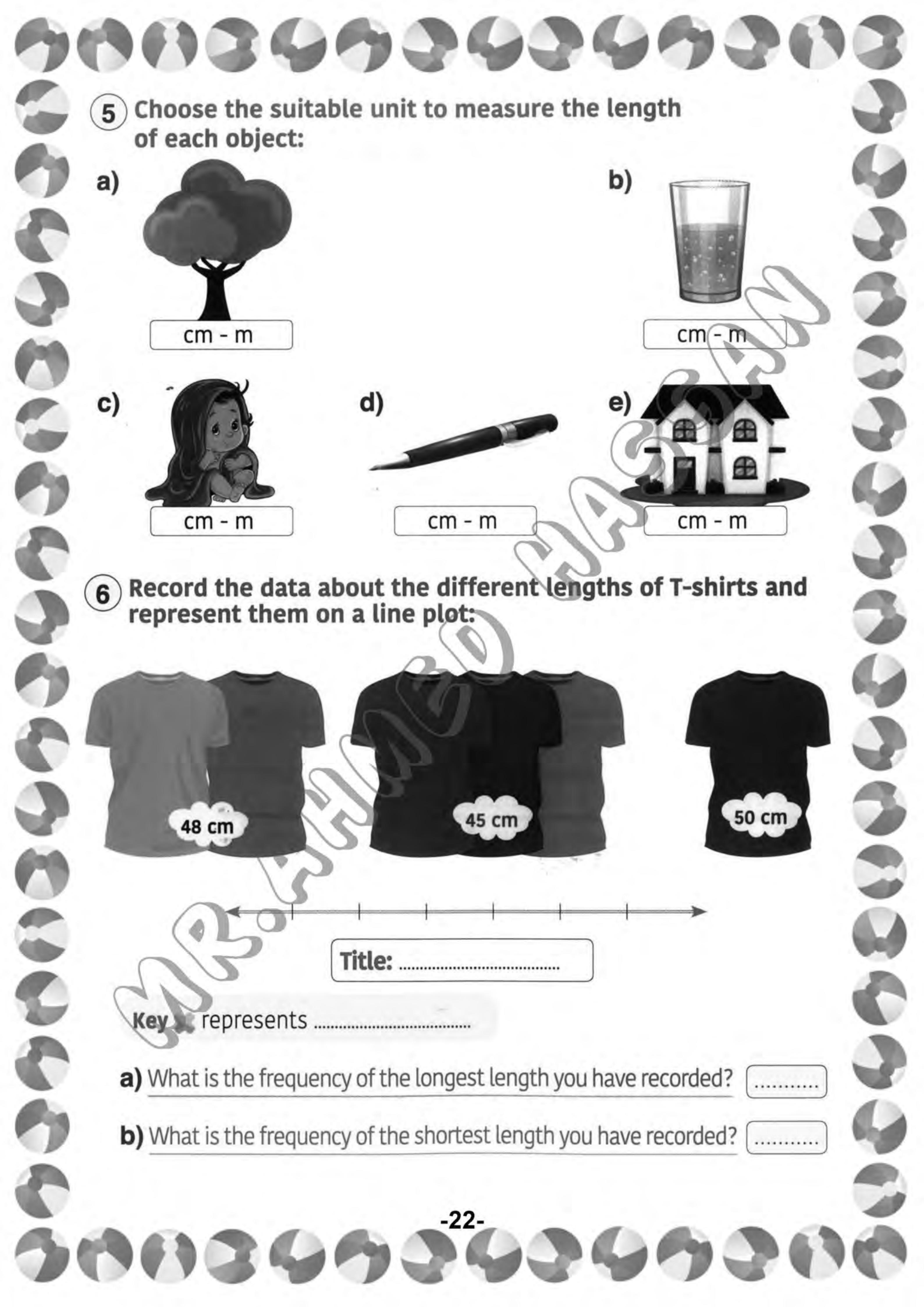
	Black	Red	Blue	Green
1st day	2	5	3	1
2nd day	5	1	4	5
3rd day	1	2	5	7
4th day	6	7	3	8

Title: ....

Key ✖ represents ....

a) What is the frequency of 1 on the line plot?

b) What is the frequency of 7 on the line plot?



5) **Choose the suitable unit to measure the length of each object:**

a) cm - m

b) cm - m

c) cm - m

d) cm - m

e) cm - m

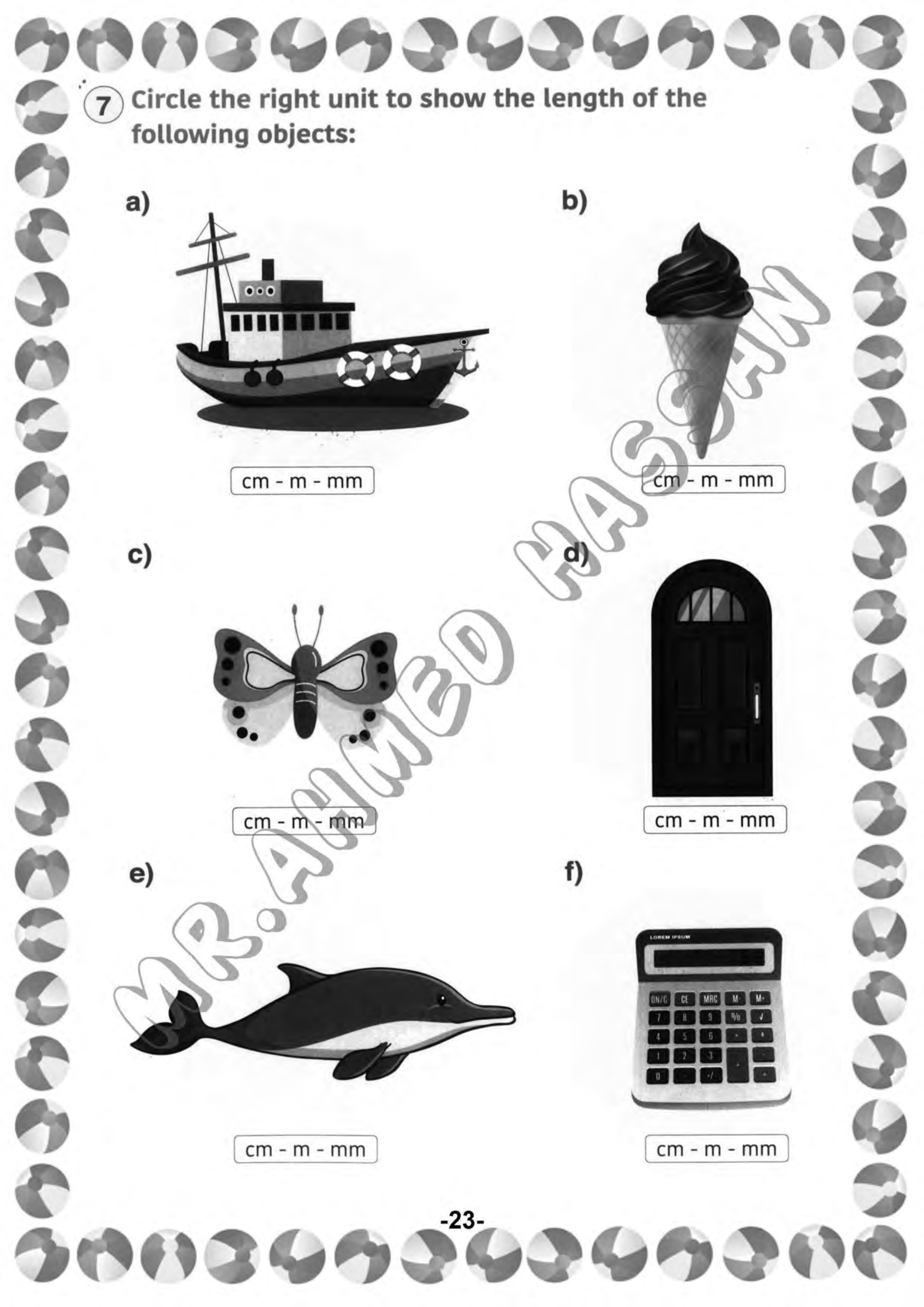
6) **Record the data about the different lengths of T-shirts and represent them on a line plot:**

Title: ....

Key ✗ represents ....

a) What is the frequency of the longest length you have recorded? ....

b) What is the frequency of the shortest length you have recorded? ....



7 **Circle the right unit to show the length of the following objects:**

a) cm - m - mm

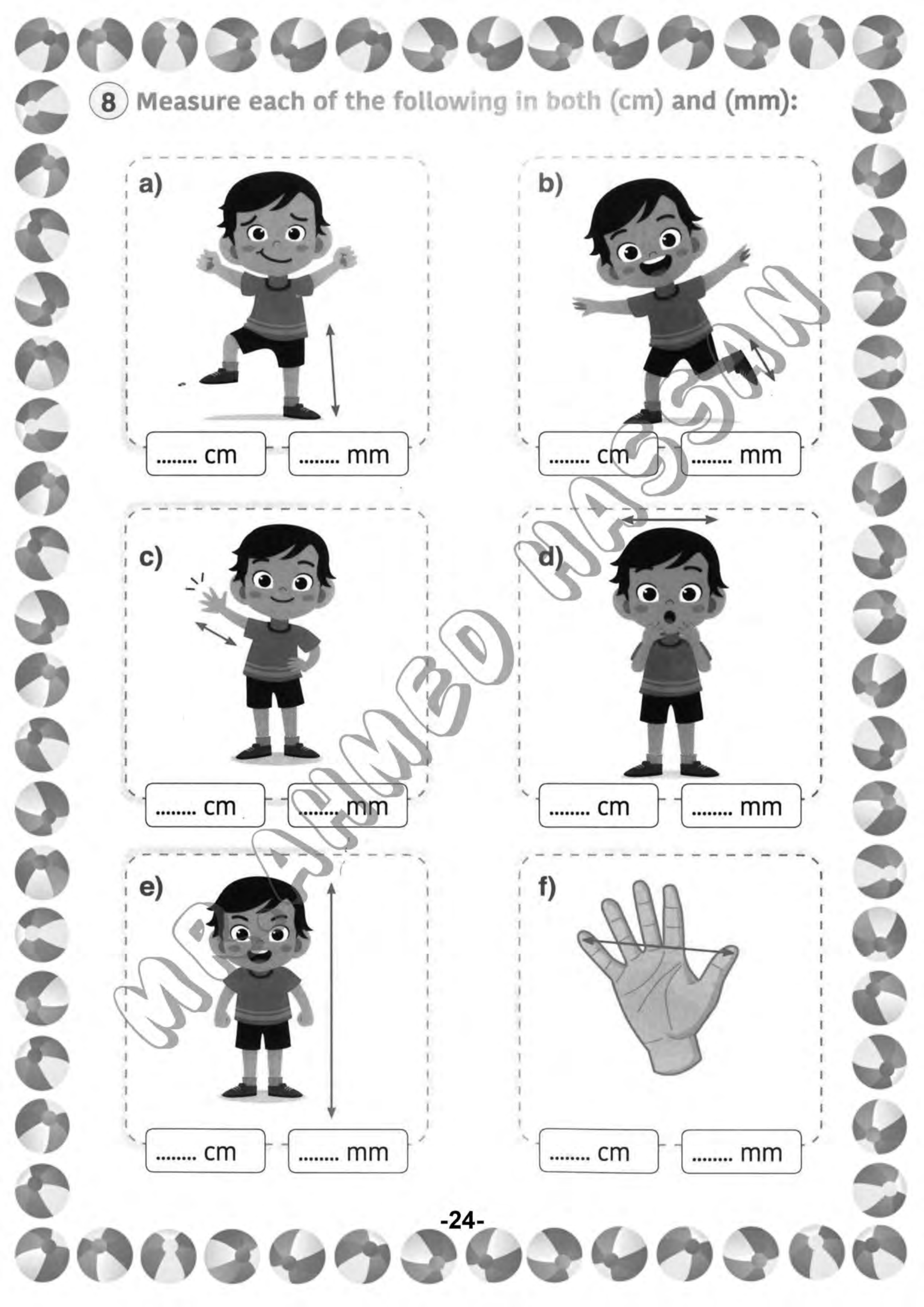
b) cm - m - mm

c) cm - m - mm

d) cm - m - mm

e) cm - m - mm

f) cm - m - mm



8 **Measure each of the following in both (cm) and (mm):**

a) .... cm .... mm

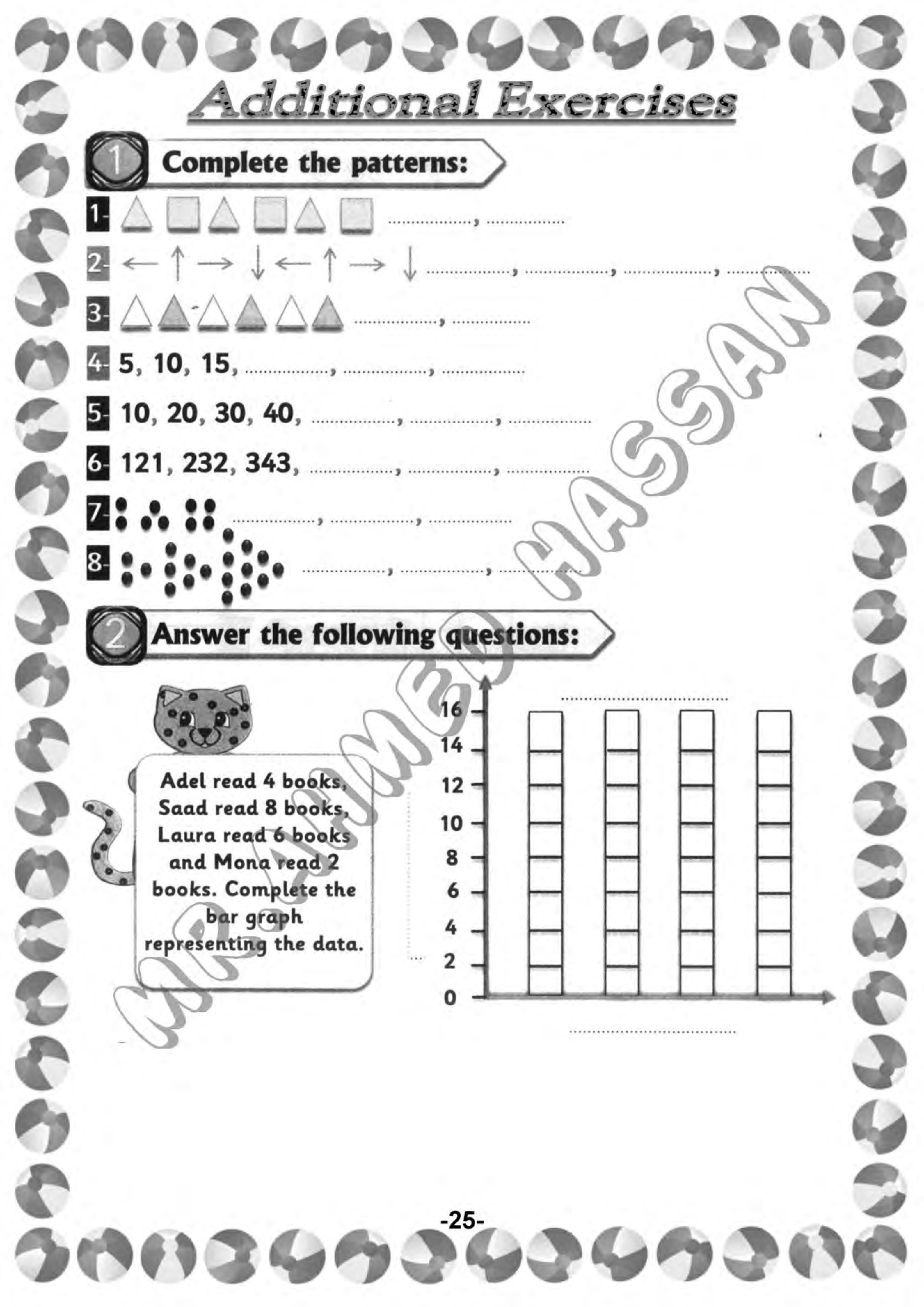
b) .... cm .... mm

c) .... cm .... mm

d) .... cm .... mm

e) .... cm .... mm

f) .... cm .... mm



Additional Exercises

1 Complete the patterns:

1- △ □ △ □ △ □ ...., ...

2- ← ↑ → ↓ ← ↑ → ↓ ...., ..., ..., ...

3- △ ▲ △ ▲ △ ▲ ...., ...

4- 5, 10, 15, ..., ..., ...

5- 10, 20, 30, 40, ..., ..., ...

6- 121, 232, 343, ..., ..., ...

7- ...., ..., ...

8- ...., ..., ...

2 Answer the following questions:

Adel read 4 books, Saad read 8 books, Laura read 6 books and Mona read 2 books. Complete the bar graph representing the data.

- The boys who went to a camp recorded the activities that they practised there.
- Which two activities were done by 39 boys?

The activity	
Cycling	😐 😐
Walking	😐 😐 😐
Rowing	😐 😐 ◖
Fishing	😐 😐 😐 😐
😐 = 6 boys	

Complete

(1) Each 😐 = ... boys, each ◖ = ... boys.

(2) Number of boys for both Cycling and walking together = ... boys.

(3) Number of those who practised walking and rowing together = ... boys.

(4) Number of those who practiced fishing and cycling together = ... boys.

⇨ Represent the following data using the line plot. Then answer the questions:

Food	Tally
Meet	卌 ||||
Fish	||||
chicken	卌 ||
Fruit	|||

....

×= ....

(1) Which food got the most votes?

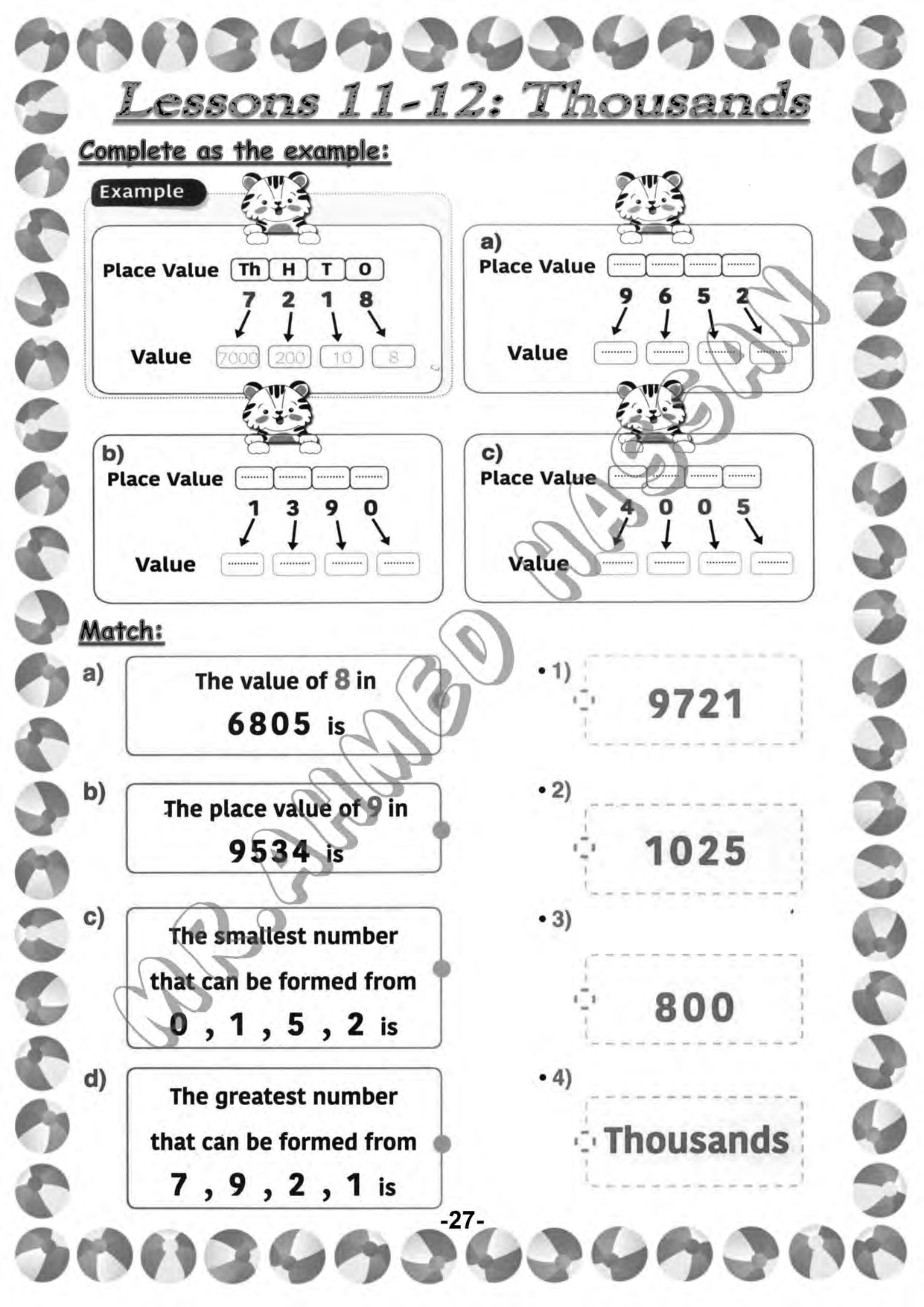
....

(2) Which food got the least number of votes?

....

(3) What is the total number of votes for all the foods?

....



Lessons 11-12: Thousands

Complete as the example:

Example

Place Value: Th | H | T | O

7 2 1 8

Value: 7000 | 200 | 10 | 8

a) Place Value: .... | .... | .... | ....

9 6 5 2

Value: .... | .... | .... | ....

b) Place Value: .... | .... | .... | ....

1 3 9 0

Value: .... | .... | .... | ....

c) Place Value: .... | .... | .... | ....

4 0 0 5

Value: .... | .... | .... | ....

Match:

a) The value of 8 in 6805 is

b) The place value of 9 in 9534 is

c) The smallest number that can be formed from 0 , 1 , 5 , 2 is

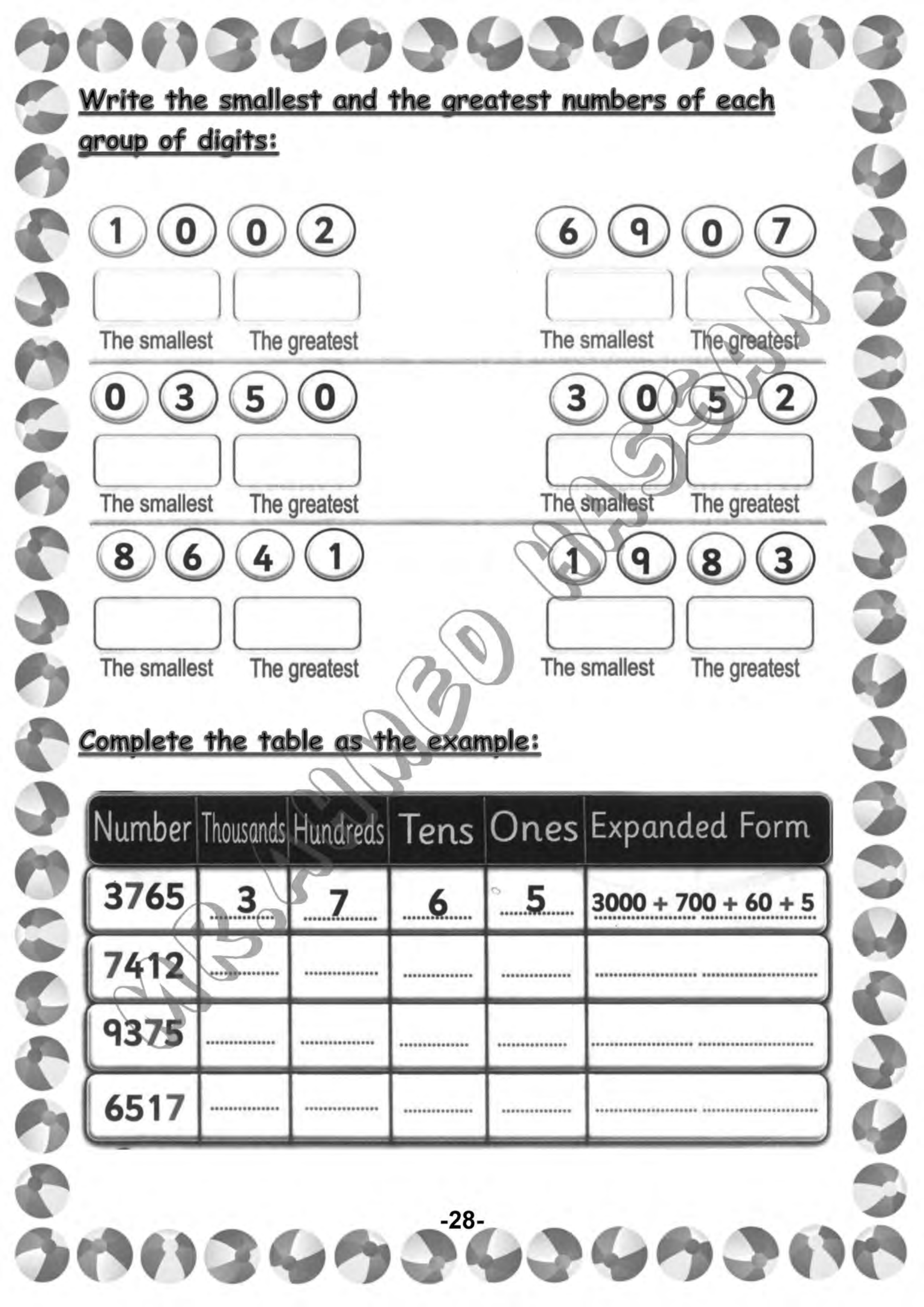
d) The greatest number that can be formed from 7 , 9 , 2 , 1 is

• 1) 9721

• 2) 1025

• 3) 800

• 4) Thousands



Write the smallest and the greatest numbers of each group of digits:

1 0 0 2

The smallest | The greatest

6 9 0 7

The smallest | The greatest

0 3 5 0

The smallest | The greatest

3 0 5 2

The smallest | The greatest

8 6 4 1

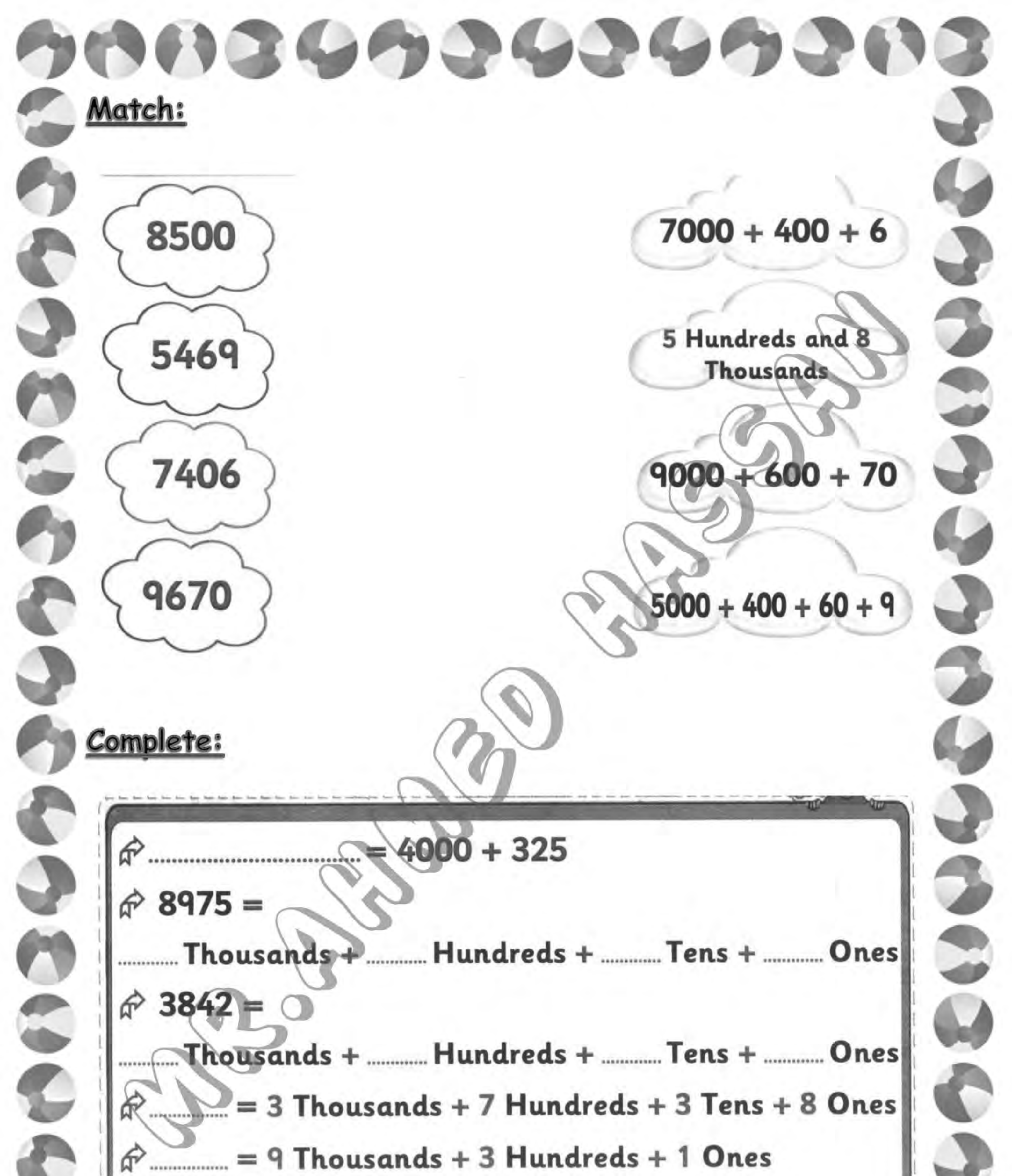
The smallest | The greatest

1 9 8 3

The smallest | The greatest

Complete the table as the example:

Number	Thousands	Hundreds	Tens	Ones	Expanded Form
3765	3	7	6	5	3000 + 700 + 60 + 5
7412	....	....	....	....	....
9375	....	....	....	....	....
6517	....	....	....	....	....

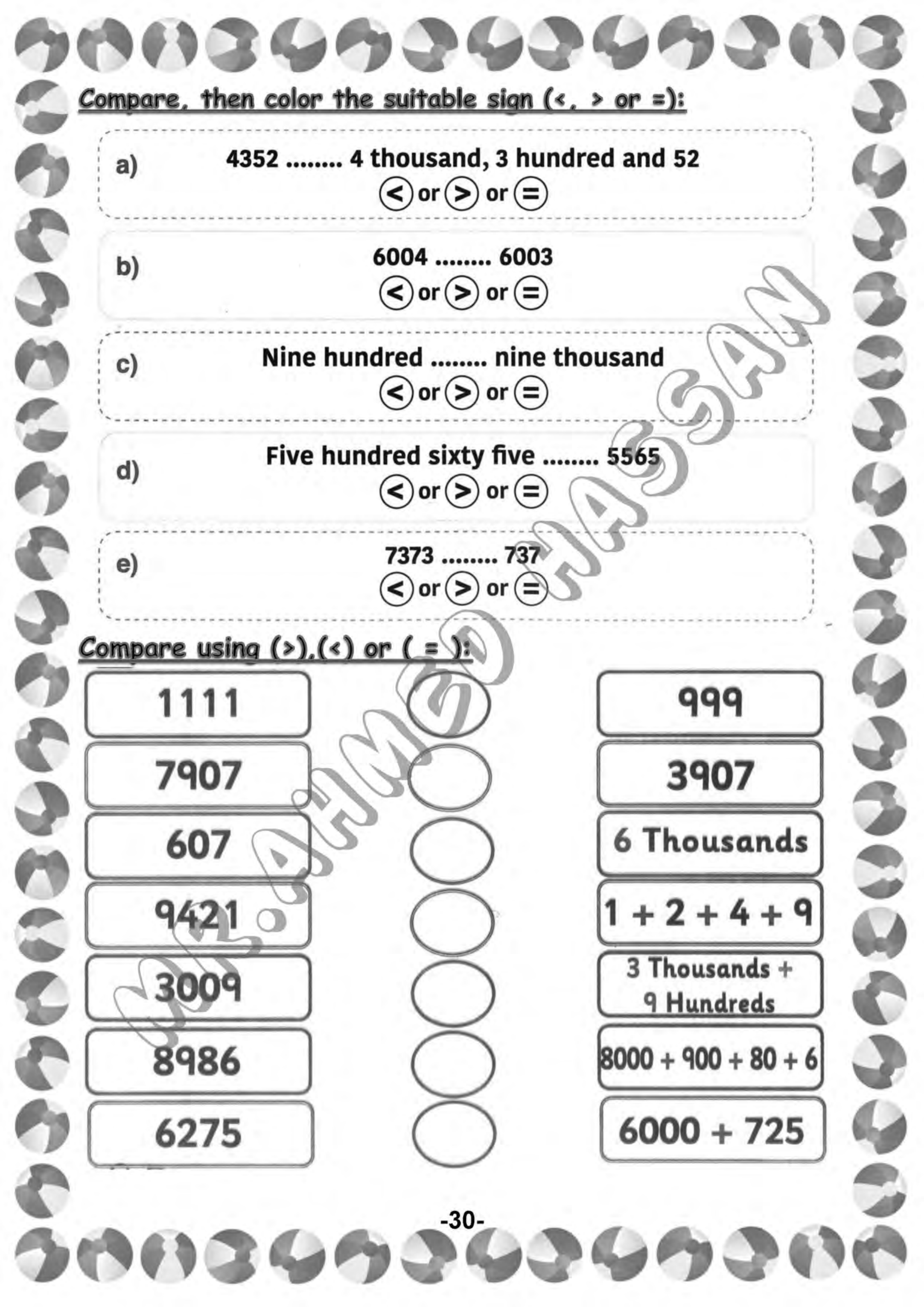


Match:

8500	7000 + 400 + 6
5469	5 Hundreds and 8 Thousands
7406	9000 + 600 + 70
9670	5000 + 400 + 60 + 9

Complete:

- ………………………… = 4000 + 325
- 8975 =
  ……… Thousands + ……… Hundreds + ……… Tens + ……… Ones
- 3842 =
  ……… Thousands + ……… Hundreds + ……… Tens + ……… Ones
- ……… = 3 Thousands + 7 Hundreds + 3 Tens + 8 Ones
- ……… = 9 Thousands + 3 Hundreds + 1 Ones



Compare, then color the suitable sign (<, > or =):

a) 4352 .... 4 thousand, 3 hundred and 52
< or > or =

b) 6004 6003
< or > or =

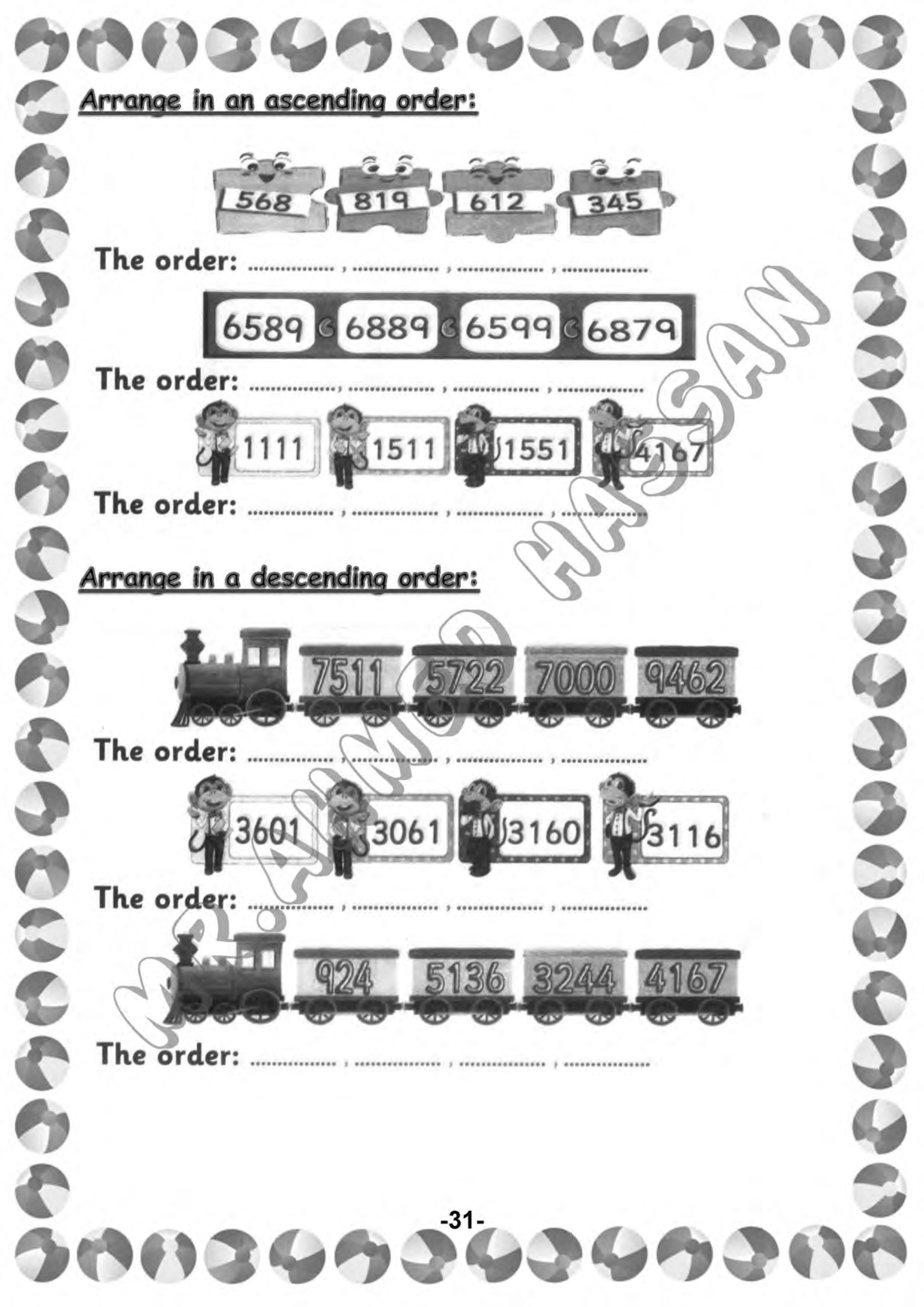
c) Nine hundred .... nine thousand
< or > or =

d) Five hundred sixty five 5565
< or > or =

e) 7373 737
< or > or =

Compare using (>),(<) or (=):

1111	◯	999
7907	◯	3907
607	◯	6 Thousands
9421	◯	1 + 2 + 4 + 9
3009	◯	3 Thousands + 9 Hundreds
8986	◯	8000 + 900 + 80 + 6
6275	◯	6000 + 725



Arrange in an ascending order:

568 819 612 345

The order: .... , ... , ... , ...

6589 6889 6599 6879

The order: .... , ... , ... , ...

1111 1511 1551 4167

The order: .... , ... , ... , ...

Arrange in a descending order:

7511 5722 7000 9462

The order: .... , ... , ... , ...

3601 3061 3160 3116

The order: .... , ... , ... , ...

924 5136 3244 4167

The order: .... , ... , ... , ...

Lessons 13-14: Ten thousands and hundred thousands

Model Place Value Relationships

Find the value of the underlined digit.

1. 6,035 ______
2. 43,782 ______
3. 506,087 ______
4. 49,254 ______
5. 136,422 ______
6. 673,512 ______
7. 814,295 ______
8. 736,144 ______

Compare the values of the underlined digits.

9. 6,300 and 530

   The value of 3 in ______ is ____ times the value of 3 in ______ .

10. 2,783 and 7,283

   The value of 2 in ______ is ____ times the value of 2 in ______ .

Problem Solving Real World

Use the table for 11–12.

11. What is the value of the digit 9 in the attendance at the Redskins vs. Titans game?

    ______

12. The attendance at which game has a 7 in the ten thousands place?

    ______

Football Game Attendance	
Game	**Attendance**
Redskins vs. Titans	69,143
Ravens vs. Panthers	73,021
Patriots vs. Colts	68,756

13. WRITE Math How does a digit in the ten thousands place compare to a digit in the thousands place?

    ______

    ______

    ______

Share and Show

MATH BOARD

1. How can you use place value and period names to read and write 324,904 in word form?

Read and write the number in two other forms.

2. four hundred eight thousand, seventeen

3. 65,058

Math Talk — MATHEMATICAL PRACTICES 2

Symbols and Words Explain how you can use the expanded form of a number to write the number in standard form.

On Your Own

Read and write the number in two other forms.

4. five hundred eight thousand

5. forty thousand, six hundred nineteen

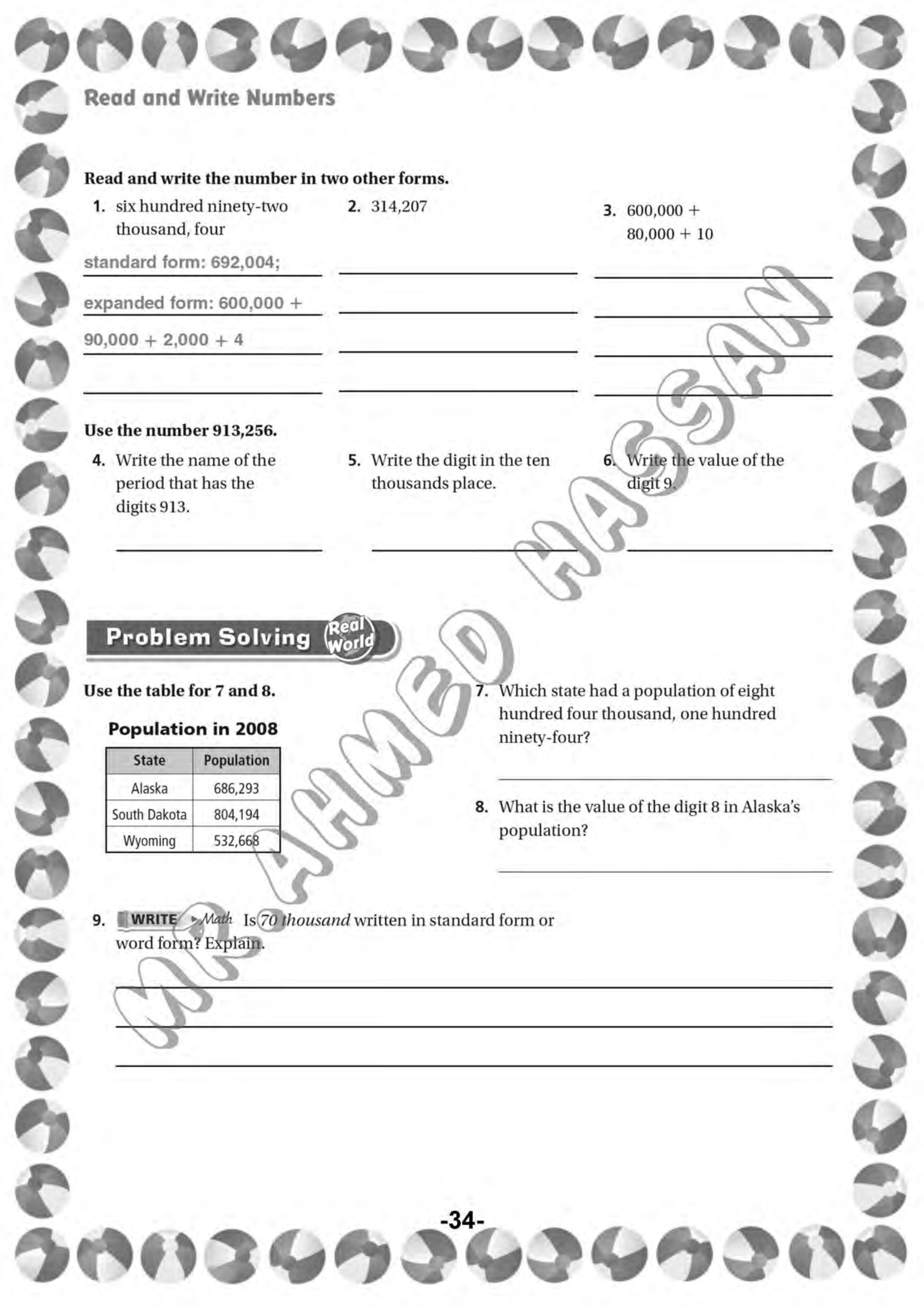
6. 570,020

7. 400,000 + 60,000 + 5,000 + 100

8. THINKSMARTER During the week of the county fair, fifteen thousand, six hundred nine entry tickets were sold. Is it correct to write the number as 15,069? Explain.

9. GO DEEPER There were 94,172 people at a football game on Saturday. On Monday, 1,000 fewer people were at a football game. In word form, how many people were at the football game on Monday?

10. Richard got 263,148 hits when he did an Internet search. What is the value of the digit 6 in this number? Explain.



Read and Write Numbers

Read and write the number in two other forms.

1. six hundred ninety-two thousand, four

standard form: 692,004;

expanded form: 600,000 + 90,000 + 2,000 + 4

2. 314,207

3. 600,000 + 80,000 + 10

Use the number 913,256.

4. Write the name of the period that has the digits 913.

5. Write the digit in the ten thousands place.

6. Write the value of the digit 9.

Problem Solving Real World

Use the table for 7 and 8.

Population in 2008

State	Population
Alaska	686,293
South Dakota	804,194
Wyoming	532,668

7. Which state had a population of eight hundred four thousand, one hundred ninety-four?

8. What is the value of the digit 8 in Alaska's population?

9. WRITE Math Is *70 thousand* written in standard form or word form? Explain.

Share and Show MATH BOARD

1. Compare 15,327 and 15,341.
   Write <, >, or =. Use the number line to help.

15,300 15,310 15,320 15,330 15,340 15,350 15,360

15,327 ◯ 15,341

Compare. Write <, >, or =.

2. 631,328 ◯ 640,009

3. 56,991 ◯ 52,880

4. 708,561 ◯ 629,672

5. 143,062 ◯ 98,643

Math Talk MATHEMATICAL PRACTICES 2

Use Reasoning Why do you not start with the ones digits when comparing three multi-digit numbers?

Order from greatest to least.

6. 20,650; 21,150; 20,890

____

On Your Own

Compare. Write <, >, or =.

7. \$2,212 ◯ \$2,600

8. 88,304 ◯ 88,304

9. \$524,116 ◯ \$61,090

10. 751,272 ◯ 851,001

Order from least to greatest.

11. 41,090; 41,190; 40,009

____

12. 910,763; 912,005; 95,408

____

MATHEMATICAL PRACTICE 7 Identify Relationships **Algebra** **Write all of the digits that can replace each ■.**

13. 567 < 5■5 < 582

____

14. 464,545 > 4■3,535 > 443,550

____

Compare and Order Numbers

Compare. Write <, >, or =.

1. 3,273 (<) 3,279
2. 1,323 ( ) 1,400
3. 52,692 ( ) 52,692
4. 413,005 ( ) 62,910
5. 382,144 ( ) 382,144
6. 157,932 ( ) 200,013
7. 401,322 ( ) 410,322
8. 989,063 ( ) 980,639
9. 258,766 ( ) 258,596

Order from least to greatest.

10. 23,710; 23,751; 23,715

____

11. 52,701; 54,025; 5,206

____

12. 465,321; 456,321; 456,231

____

13. 330,820; 329,854; 303,962

____

Problem Solving Real World

14. An online newspaper had 350,080 visitors in October, 350,489 visitors in November, and 305,939 visitors in December. What is the order of the months from greatest to least number of visitors?

____

15. The total land area in square miles of each of three states is shown below.
    Colorado: 103,718
    New Mexico: 121,356
    Arizona: 113,635
    What is the order of the states from least to greatest total land area?

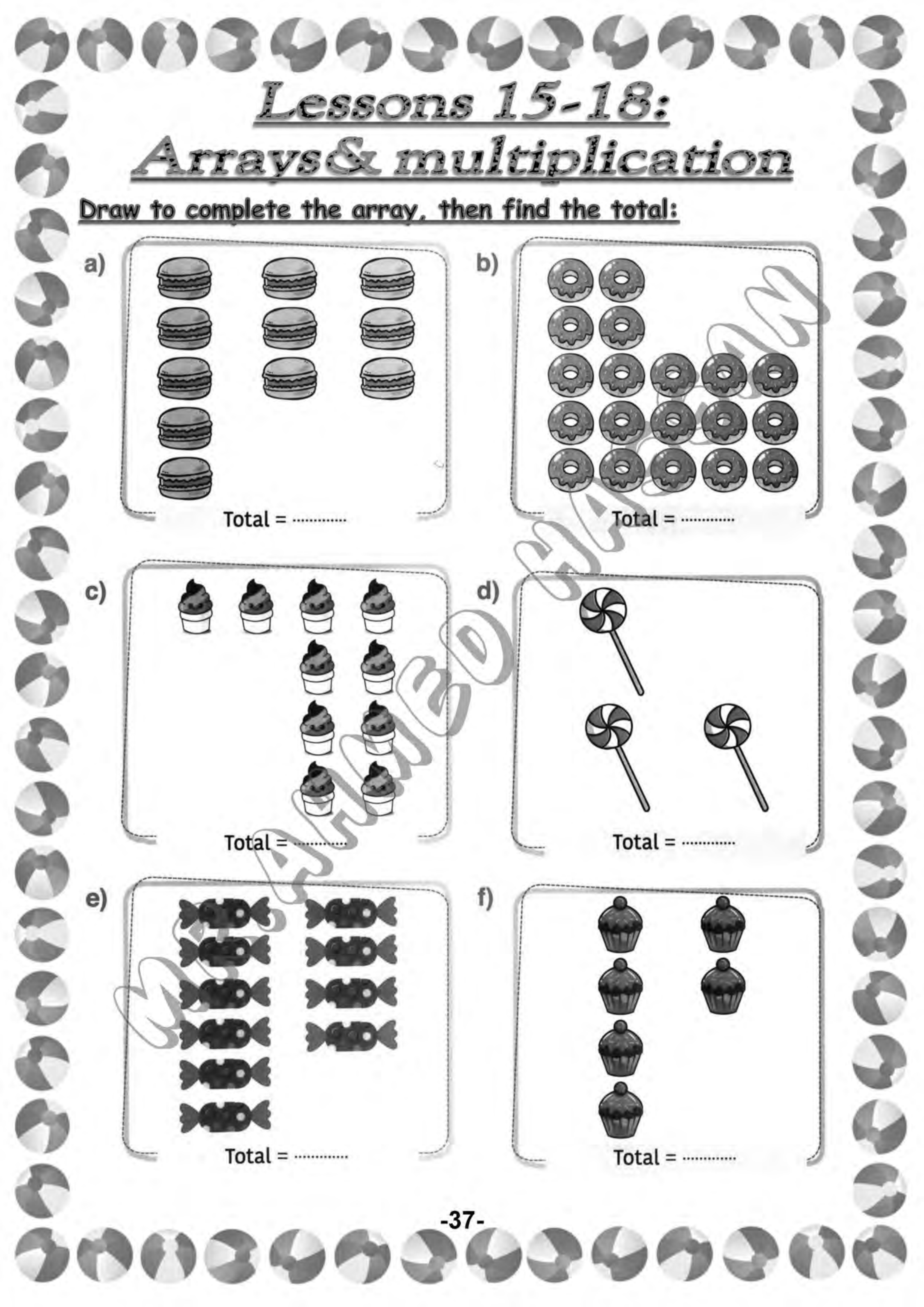
____

16. **WRITE** *Math* Suppose the leftmost digits of two numbers are 8 and 3. Can you tell which number is greater? Explain.

____

____

____



Lessons 15-18:
Arrays& multiplication

Draw to complete the array, then find the total:

a) Total = …………

b) Total = …………

c) Total = …………

d) Total = …………

e) Total = …………

f) Total = …………



Complete the multiplication equation to describe the following arrays, then choose <, > or =:

a) $4 \times \boxed{2} = 8$ (<, > or =) $\square \times 3 =$ ....

The number of [elephant]   The number of [cow]

b) $\square \times 6 =$ .... (<, > or =) $\square \times 4 =$ ....

The number of [zebra]   The number of [deer]

Draw equal groups. Skip count to find how many.

1. 2 groups of 2 ___4___

2. 3 groups of 6 ______

Count equal groups to find how many.

3. ______ groups of ______

______ in all

4. ______ groups of ______

______ in all

Problem Solving Real World

5. Marcia puts 2 slices of cheese on each sandwich. She makes 4 cheese sandwiches. How many slices of cheese does Marcia use in all?

______

6. Tomas works in a cafeteria kitchen. He puts 3 cherry tomatoes on each of 5 salads. How many tomatoes does he use?

______

7. WRITE Math Write a problem that can be solved by using equal groups.

______

______

Relate Addition and Multiplication

Draw a quick picture to show the equal groups. Then write related addition and multiplication sentences.

1. 3 groups of 5



5 + 5 + 5 = 15

3 × 5 = 15

2. 3 groups of 4

___ + ___ + ___ = ___

___ × ___ = ___

3. 5 groups of 2

___ + ___ + ___ + ___ + ___ = ___

___ × ___ = ___

Complete. Write a multiplication sentence.

4. 7 + 7 + 7 = ___

___ × ___ = ___

5. 3 + 3 + 3 = ___

___ × ___ = ___

Problem Solving (Real World)

6. There are 6 jars of pickles in a box. Ed has 3 boxes of pickles. How many jars of pickles does he have? Write a multiplication sentence to find the answer.

___ × ___ = ___ jars

7. Each day, Jani rides her bike 5 miles. How many miles does Jani ride in 4 days? Write a multiplication sentence to find the answer.

___ × ___ = ___ miles

8. WRITE Math Write a word problem that involves combining three equal groups.

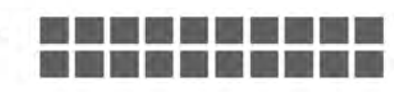
____

____



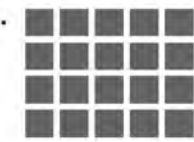
1. Complete. Use the array.

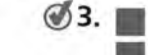
_____ rows of _____ = _____



_____ $\times$ _____ = _____

Write a multiplication sentence for the array.

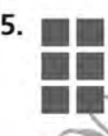
2.  ____________________

3.  ____________________

On Your Own

Write a multiplication sentence for the array.

4.  ____________________

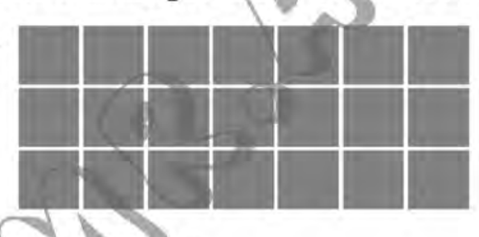
5.  ____________________

Draw an array to find the product.

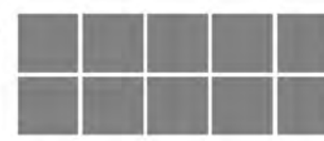
6. $3 \times 6 =$ _____

7. $4 \times 7 =$ _____

Write a multiplication sentence for the array.

1. 

$3 \times 7 =$ 21

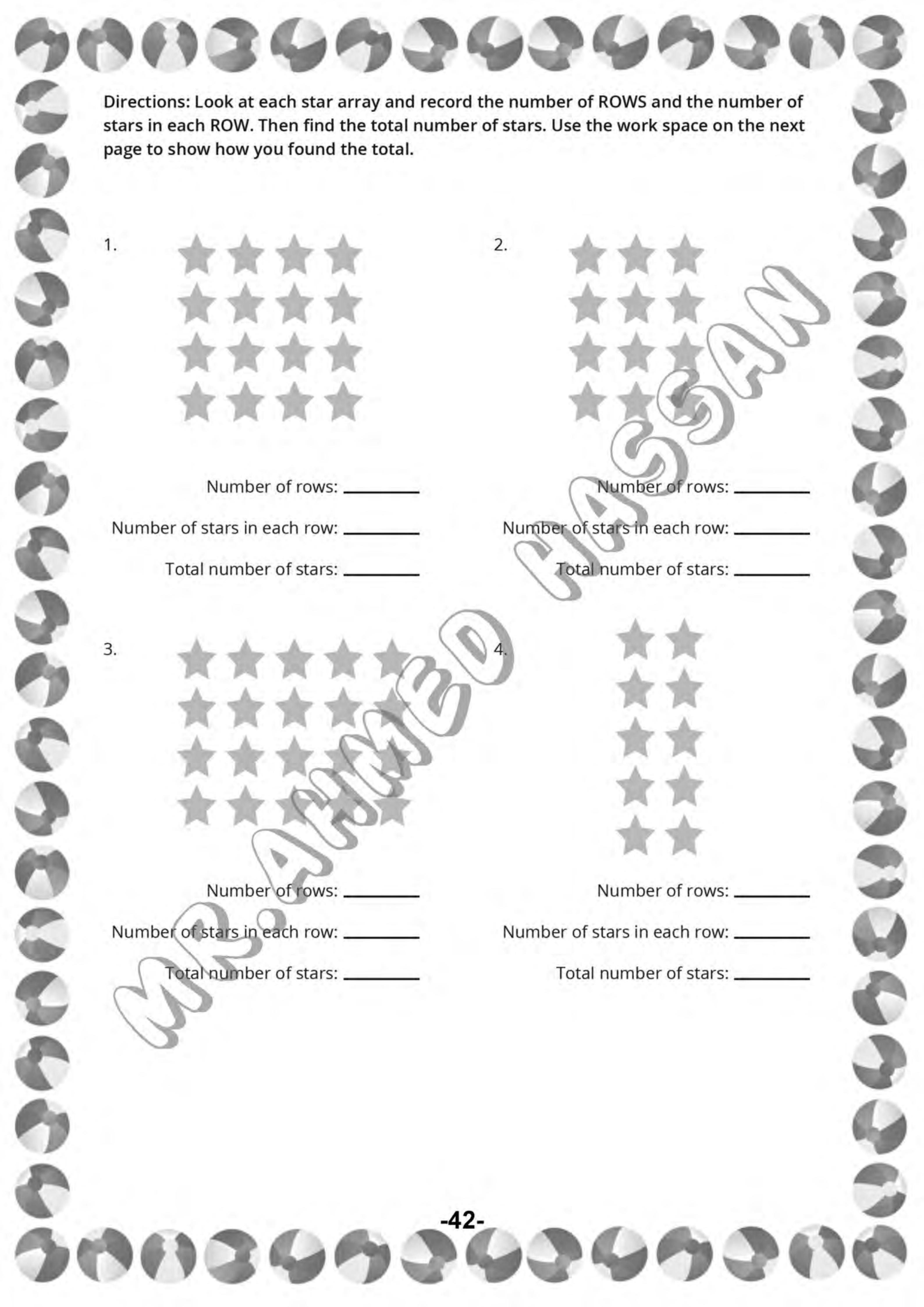
2. 

$2 \times 5 =$ _____

Draw an array to find the product.

3. $4 \times 2 =$ _____

4. $2 \times 8 =$ _____



Directions: Look at each star array and record the number of ROWS and the number of stars in each ROW. Then find the total number of stars. Use the work space on the next page to show how you found the total.

1.

Number of rows: ________

Number of stars in each row: ________

Total number of stars: ________

2.

Number of rows: ________

Number of stars in each row: ________

Total number of stars: ________

3.

Number of rows: ________

Number of stars in each row: ________

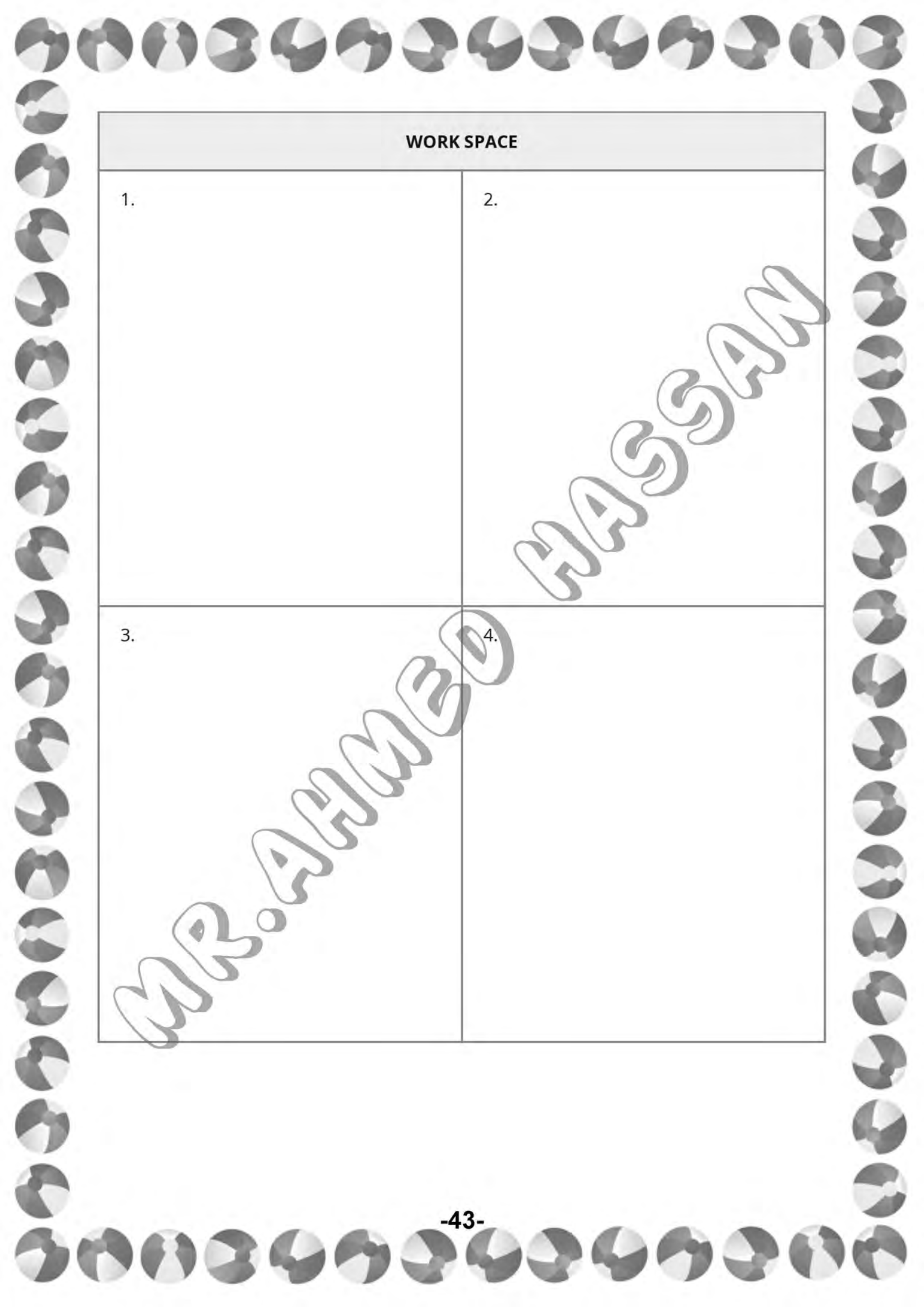
Total number of stars: ________

4.

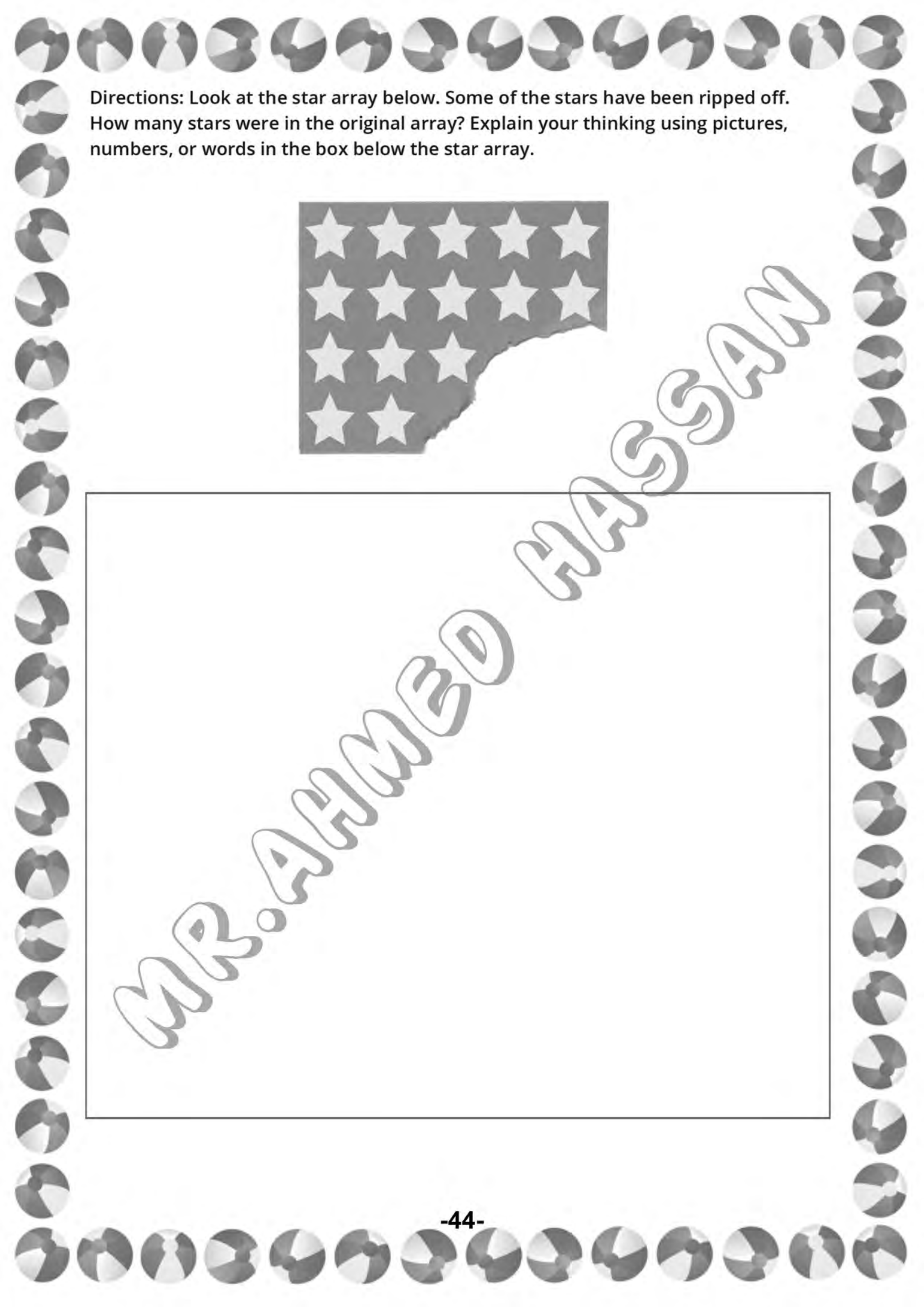
Number of rows: ________

Number of stars in each row: ________

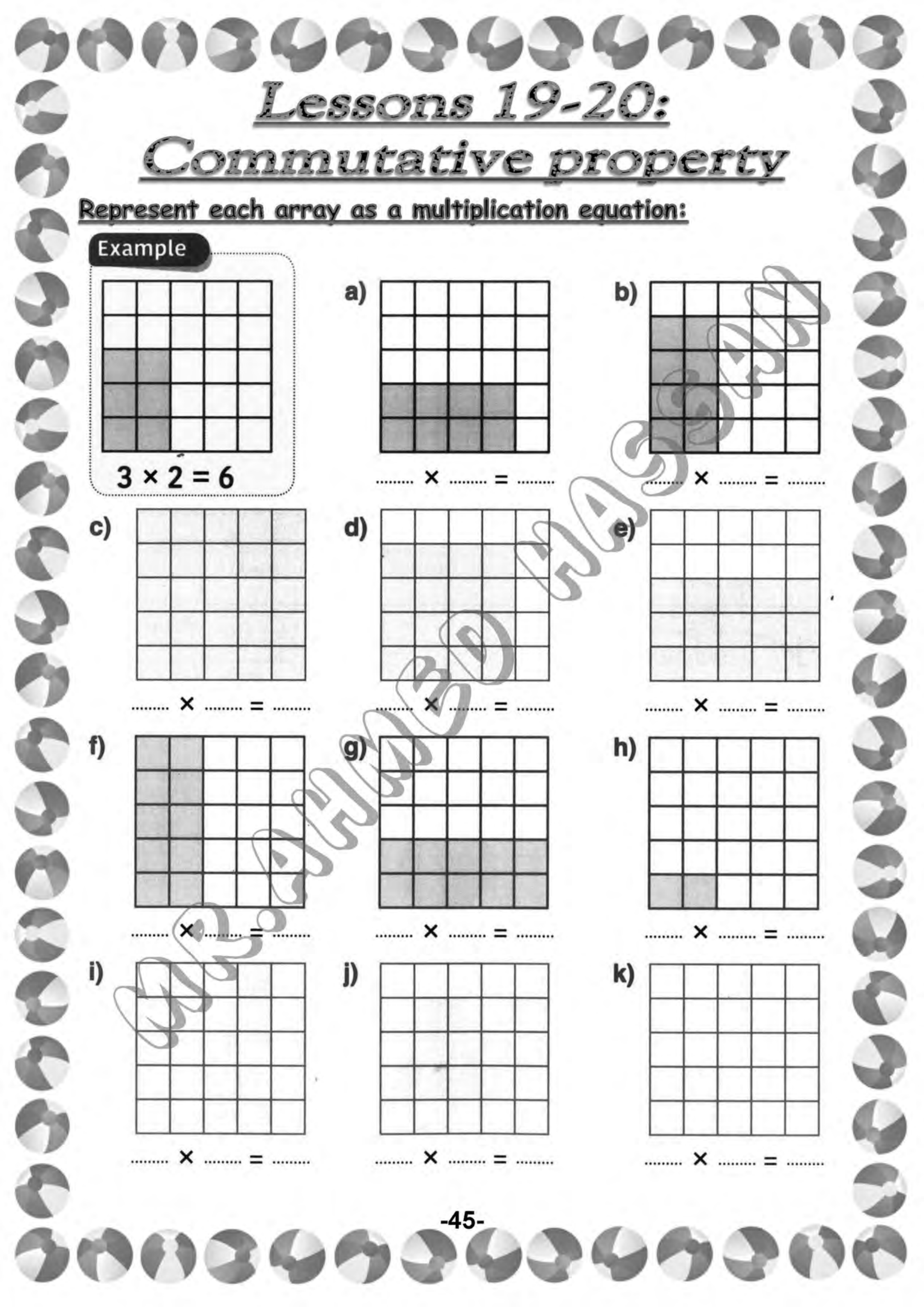
Total number of stars: ________



WORK SPACE	
1.	2.
3.	4.



Directions: Look at the star array below. Some of the stars have been ripped off. How many stars were in the original array? Explain your thinking using pictures, numbers, or words in the box below the star array.



Lessons 19-20: Commutative property

Represent each array as a multiplication equation:

Example

$3 \times 2 = 6$

a) .... × .... = ...

b) .... × .... = ...

c) .... × .... = ...

d) .... × .... = ...

e) .... × .... = ...

f) .... × .... = ...

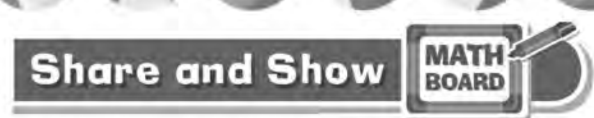
g) .... × .... = ...

h) .... × .... = ...

i) .... × .... = ...

j) .... × .... = ...

k) .... × .... = ...



Share and Show

1. Write a multiplication sentence for the array.



______ ______

Math Talk MATHEMATICAL PRACTICES 1

Make Sense of Problems Explain what the factor 2 means in each multiplication sentence.

Write a multiplication sentence for the model. Then use the Commutative Property of Multiplication to write a related multiplication sentence.

2.



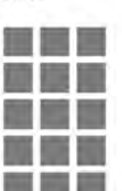


___ × ___ = ___

___ × ___ = ___



3.



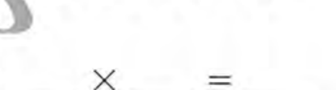
___ × ___ = ___



___ × ___ = ___

4.

___ × ___ = ___

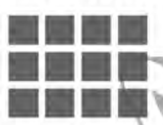


___ × ___ = ___

On Your Own

Write a multiplication sentence for the model. Then use the Commutative Property of Multiplication to write a related multiplication sentence.

5.





___ × ___ = ___



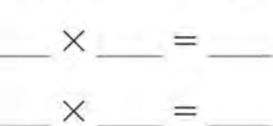
___ × ___ = ___

6.



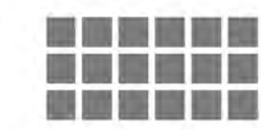


___ × ___ = ___



___ × ___ = ___

7.



___ × ___ = ___

___ × ___ = ___

MATHEMATICAL PRACTICE 2 Use Reasoning **Algebra** **Write the unknown factor.**

8. $3 \times 7 =$ ______ $\times 3$

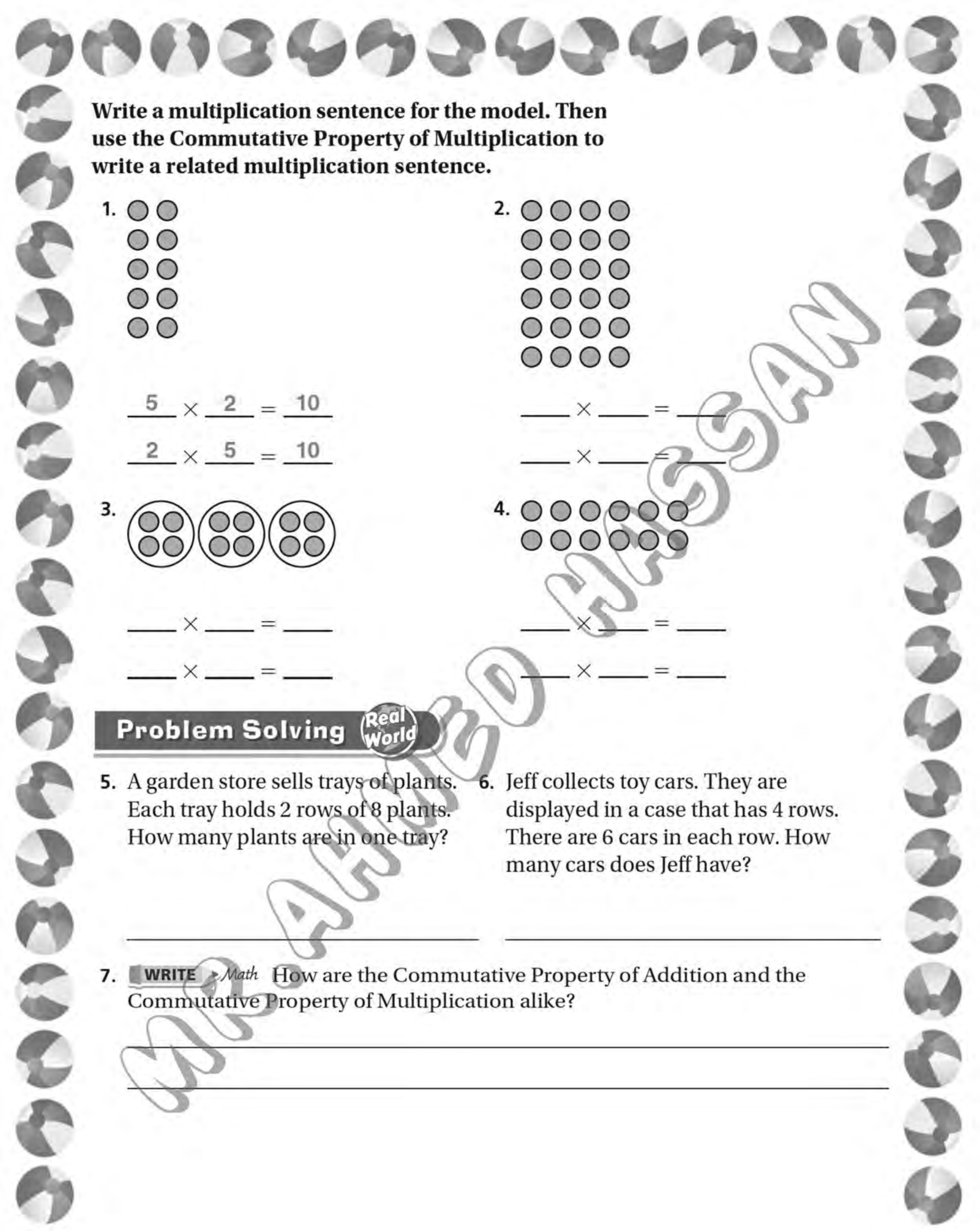
9. $4 \times 5 = 10 \times$ ______

10. $3 \times 6 =$ ______ $\times 9$

11. $6 \times$ ______ $= 4 \times 9$

12. ______ $\times 8 = 4 \times 6$

13. $5 \times 8 = 8 \times$ ______



Write a multiplication sentence for the model. Then use the Commutative Property of Multiplication to write a related multiplication sentence.

1. 5 × 2 = 10

   2 × 5 = 10

2. ____ × ____ = ____

   ____ × ____ = ____

3. ____ × ____ = ____

   ____ × ____ = ____

4. ____ × ____ = ____

   ____ × ____ = ____

Problem Solving (Real World)

5. A garden store sells trays of plants. Each tray holds 2 rows of 8 plants. How many plants are in one tray?

   ____

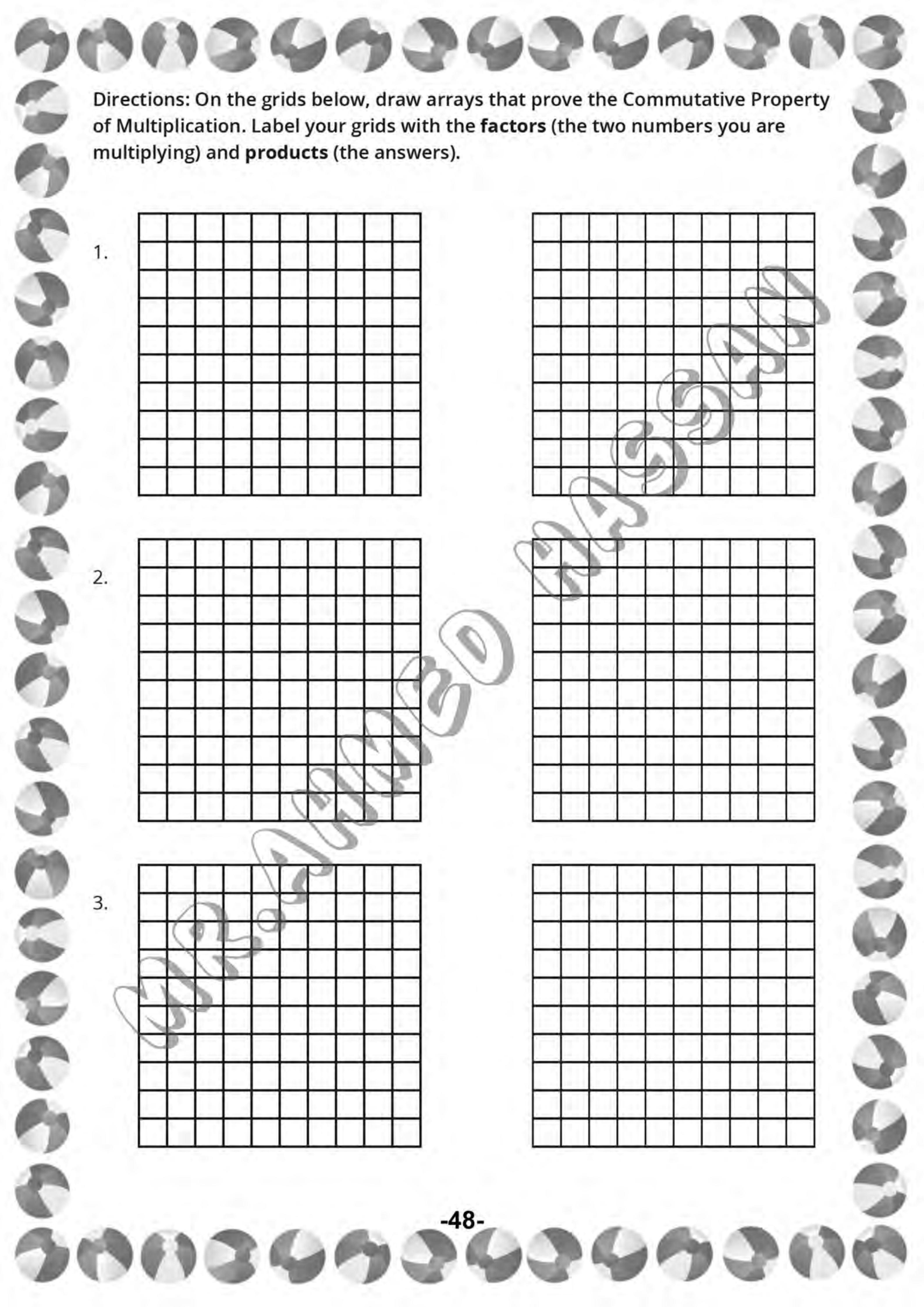
6. Jeff collects toy cars. They are displayed in a case that has 4 rows. There are 6 cars in each row. How many cars does Jeff have?

   ____

7. WRITE Math How are the Commutative Property of Addition and the Commutative Property of Multiplication alike?

   ____

   ____



Directions: On the grids below, draw arrays that prove the Commutative Property of Multiplication. Label your grids with the **factors** (the two numbers you are multiplying) and **products** (the answers).

1.

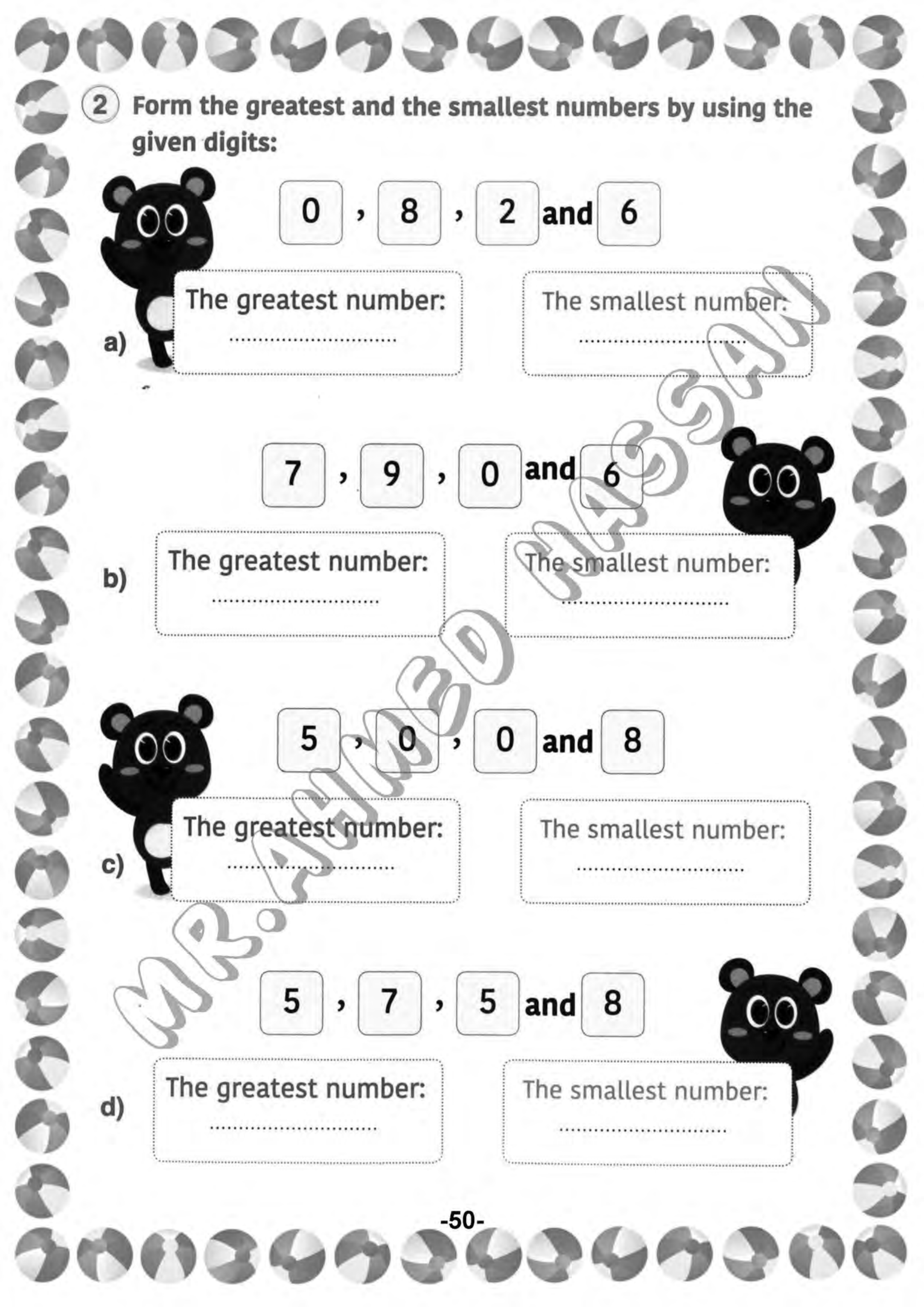
2.

3.

Exercises on chapter2

① **Complete the following table as the example:**

	Standard form	Base ten form	Expanded form
Example	2,123		**2000 + 100 + 20 + 3**
a)	1,346		.... + ... + ... + ...
b)	3,571		.... + ... + ... + ...
c)	2,056		.... + ... + ... + ...



② **Form the greatest and the smallest numbers by using the given digits:**

a) 0 , 8 , 2 and 6

The greatest number: ....

The smallest number: ....

b) 7 , 9 , 0 and 6

The greatest number: ....

The smallest number: ....

c) 5 , 0 , 0 and 8

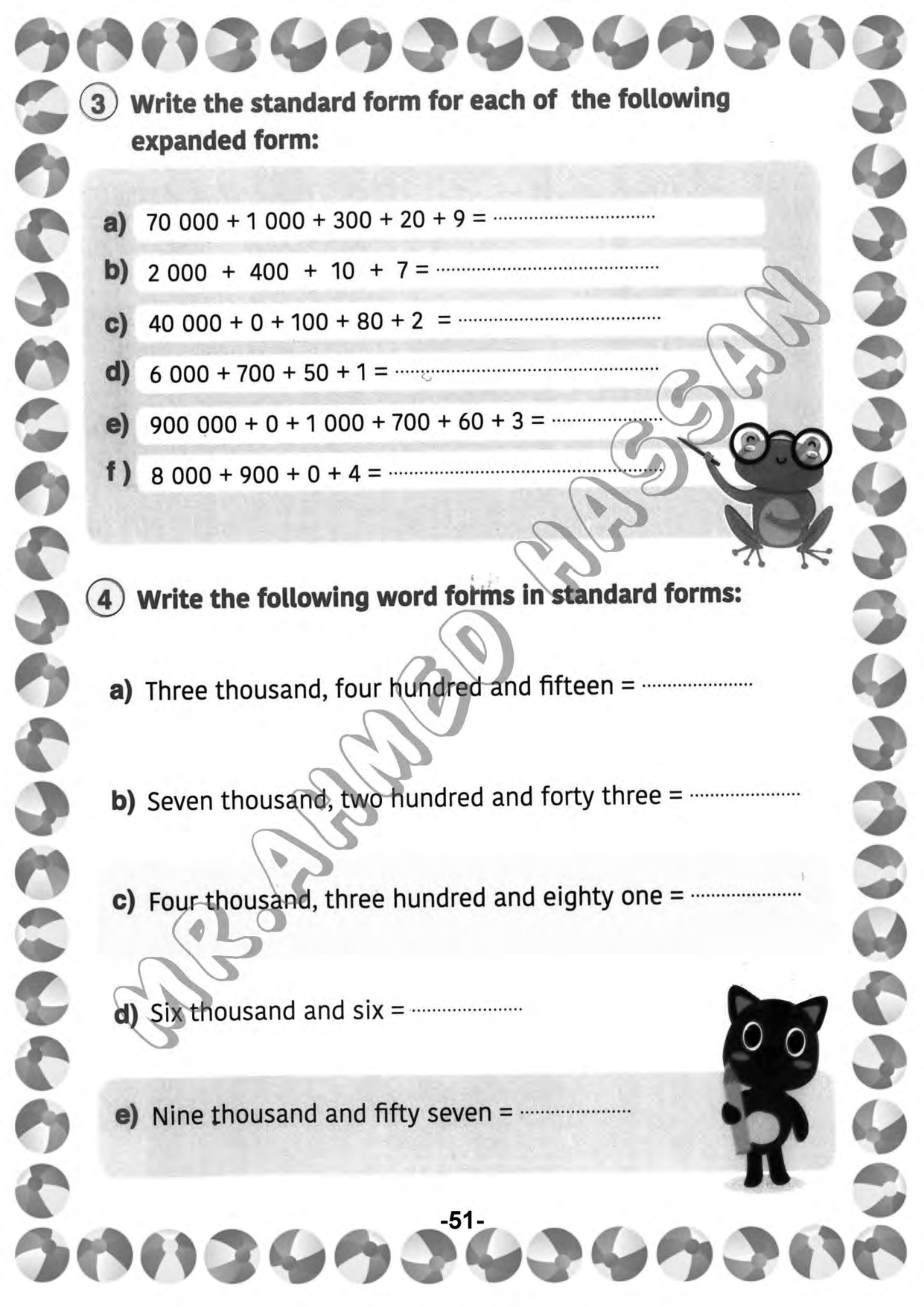
The greatest number: ....

The smallest number: ....

d) 5 , 7 , 5 and 8

The greatest number: ....

The smallest number: ....



3 **Write the standard form for each of the following expanded form:**

a) 70 000 + 1 000 + 300 + 20 + 9 = ...

b) 2 000 + 400 + 10 + 7 = ...

c) 40 000 + 0 + 100 + 80 + 2 = ...

d) 6 000 + 700 + 50 + 1 = ...

e) 900 000 + 0 + 1 000 + 700 + 60 + 3 = ...

f) 8 000 + 900 + 0 + 4 = ...

4 **Write the following word forms in standard forms:**

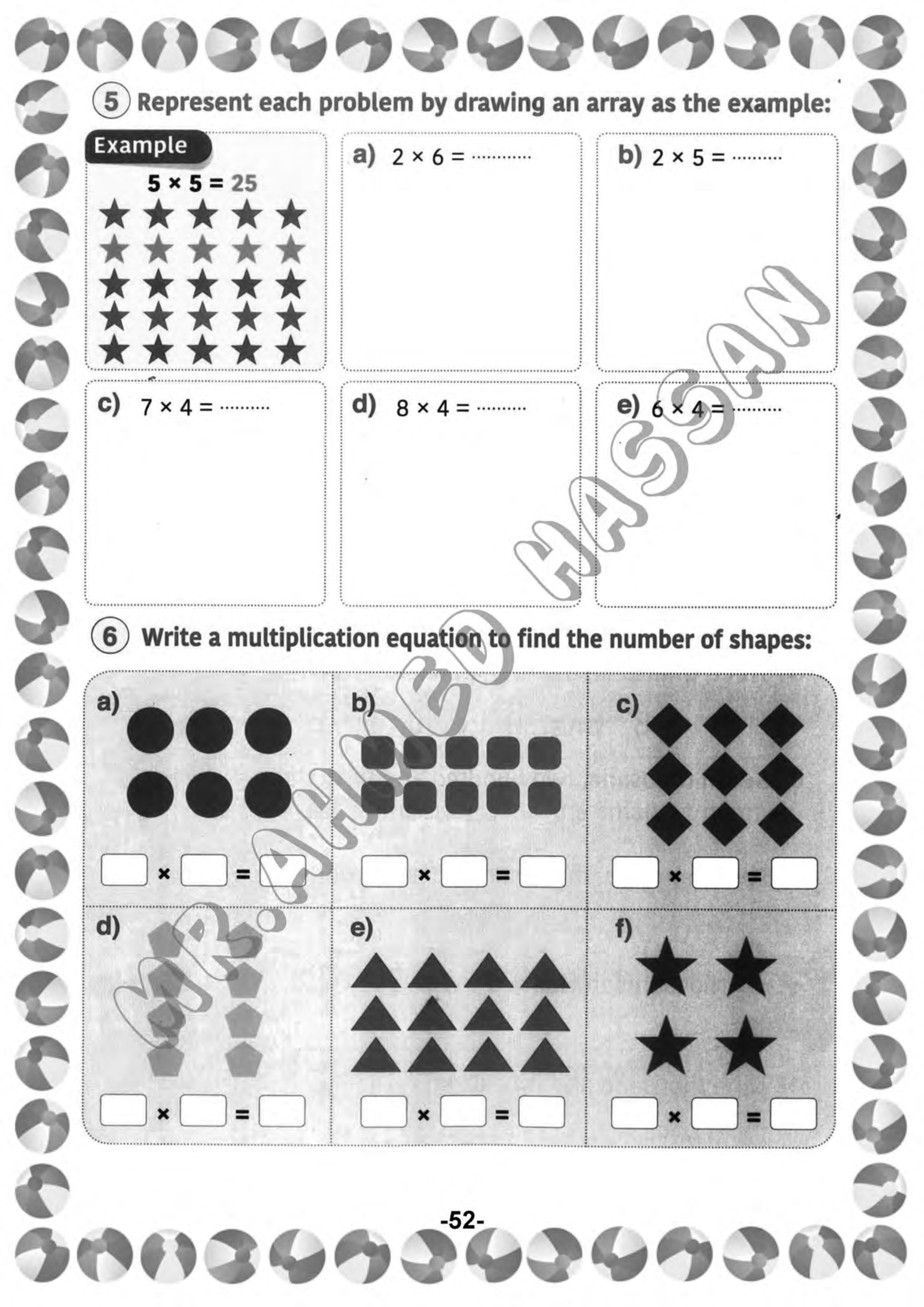
a) Three thousand, four hundred and fifteen = ...

b) Seven thousand, two hundred and forty three = ...

c) Four thousand, three hundred and eighty one = ...

d) Six thousand and six = ...

e) Nine thousand and fifty seven = ...



5 Represent each problem by drawing an array as the example:

Example

5 × 5 = 25

a) 2 × 6 = ...

b) 2 × 5 = ...

c) 7 × 4 = ...

d) 8 × 4 = ...

e) 6 × 4 = ...

6 Write a multiplication equation to find the number of shapes:

a) ☐ × ☐ = ☐

b) ☐ × ☐ = ☐

c) ☐ × ☐ = ☐

d) ☐ × ☐ = ☐

e) ☐ × ☐ = ☐

f) ☐ × ☐ = ☐

Additional Exercises

1 Complete:

1) 4 Hundreds + 5 Tens + 4 Ones = ...

2) 4 Hundreds + 6 Tens + 2 Ones = ... + ... + ...

3) 900 + 40 + 5 = ... Hundreds + ... Tens + ... Ones.

4) 4 Hundreds = ... Tens .

5) 7 Hundreds = ...

6) The value of digit 5 in the number 675 is ....

7) represents the number: ....

8) Seventy-nine thousand four hundred, and ninety-one is written as ....

9) The value of the digit 9 in the number 796204 is ....

10) The smallest number formed of the digits 7, 0, 3, 2, 9 is ....

11) The greatest number formed of the digits 6, 3, 2, 5, 6, 3 is ....

12) 470 hundreds = ... tens = ...

13) 7800 = ... hundreds = ... tens .

14) 90 hundreds = ... tens .

15) The next number in this pattern 7262, 7264, 7266 is ....

16) The next number in this pattern 7000, 6990, 6980 is ....

2 Compare using (>), (<) or (=):

1) 900 + 100 + 129 ☐ One thousand, one hundred and twenty-nine.

2) Five thousand and four ☐ 5040.

3) 300 + 6 + 60 + 7000 ☐ 7663.

4) 51920 ☐ 252345.

3 Arrange ascendingly and descendingly:

a) 35762, 31672, 760025, 76123

Ascending order: ……………, ……………, ……………, ……………

Descending order: ……………, ……………, ……………, ……………

b) 47676, (3000 + 200 + 5), (47000 + 149), 76727

Ascending order: ……………, ……………, ……………, ……………

Descending order: ……………, ……………, ……………, ……………

c) 213977, 230978, 230106, 232767, 239800

Ascending order: ……………, ……………, ……………, ……………

Descending order: ……………, ……………, ……………, ……………

d) 224671, 214761, 247621, 25340, 47821

Ascending order: ……………, ……………, ……………, ……………

Descending order: ……………, ……………, ……………, ……………

Lessons 21-22: Multiplication story problems

Example problem: Farha went to the store to buy rolls for a big family dinner. At the store, she bought 4 bags of rolls. Each bag contained 5 rolls. How many rolls did Farha buy?

Work Space:

Multiplication equation: ______________________________

PRACTICE:

- **Read each problem carefully.**
- **Show your thinking with pictures, numbers, and/or words.**
- **Record a multiplication equation that represents this problem.**

1. On Samira's walk home she saw 6 cars. If each car has 4 wheels, how many wheels did she see in all?

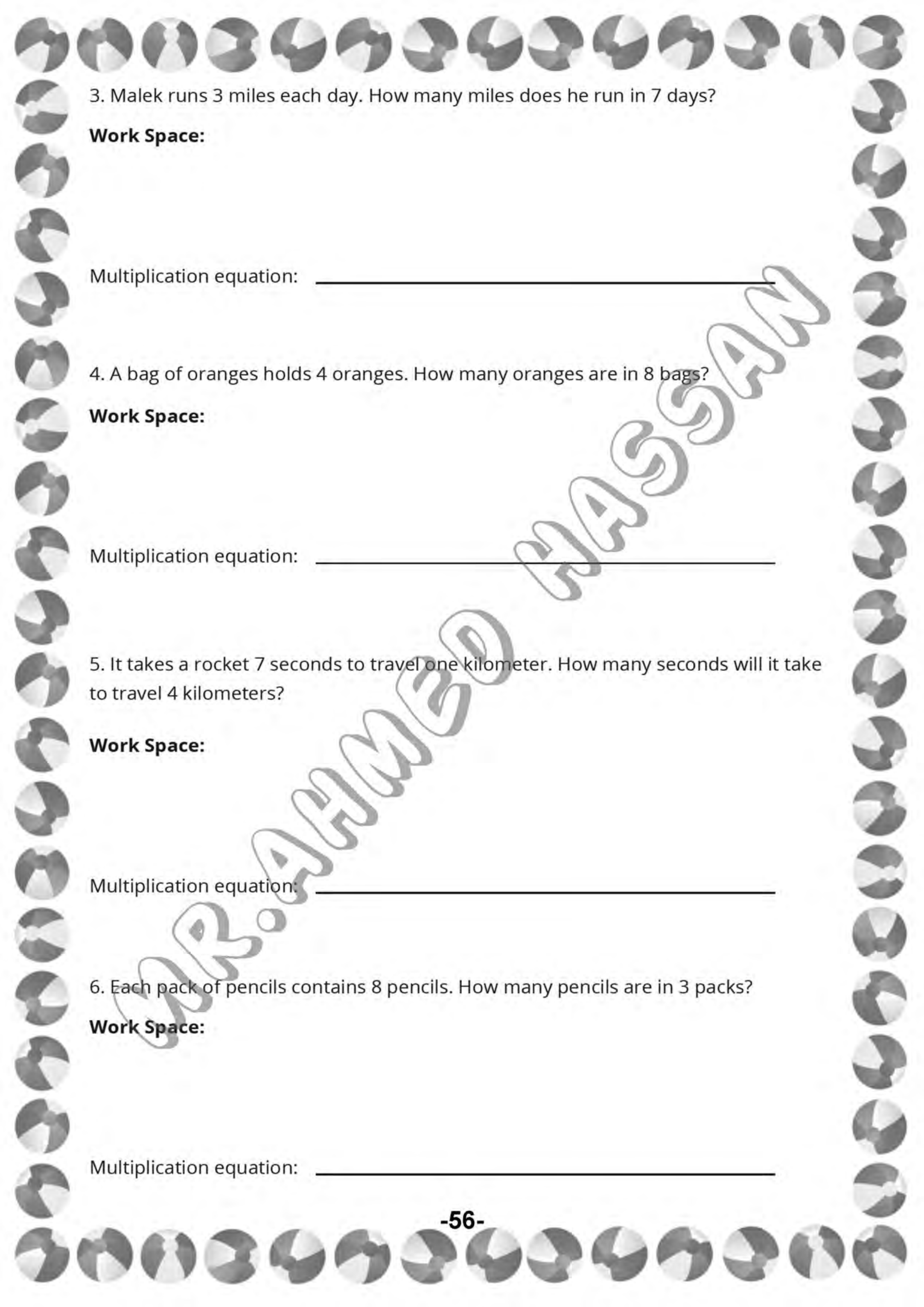
Work Space:

Multiplication equation: ______________________________

2. Manal brought 6 bags of cookies to school. Each bag had 3 cookies in it. How many cookies were there all together?

Work Space:

Multiplication equation: ______________________________



3. Malek runs 3 miles each day. How many miles does he run in 7 days?

Work Space:

Multiplication equation: ______________________________

4. A bag of oranges holds 4 oranges. How many oranges are in 8 bags?

Work Space:

Multiplication equation: ______________________________

5. It takes a rocket 7 seconds to travel one kilometer. How many seconds will it take to travel 4 kilometers?

Work Space:

Multiplication equation: ______________________________

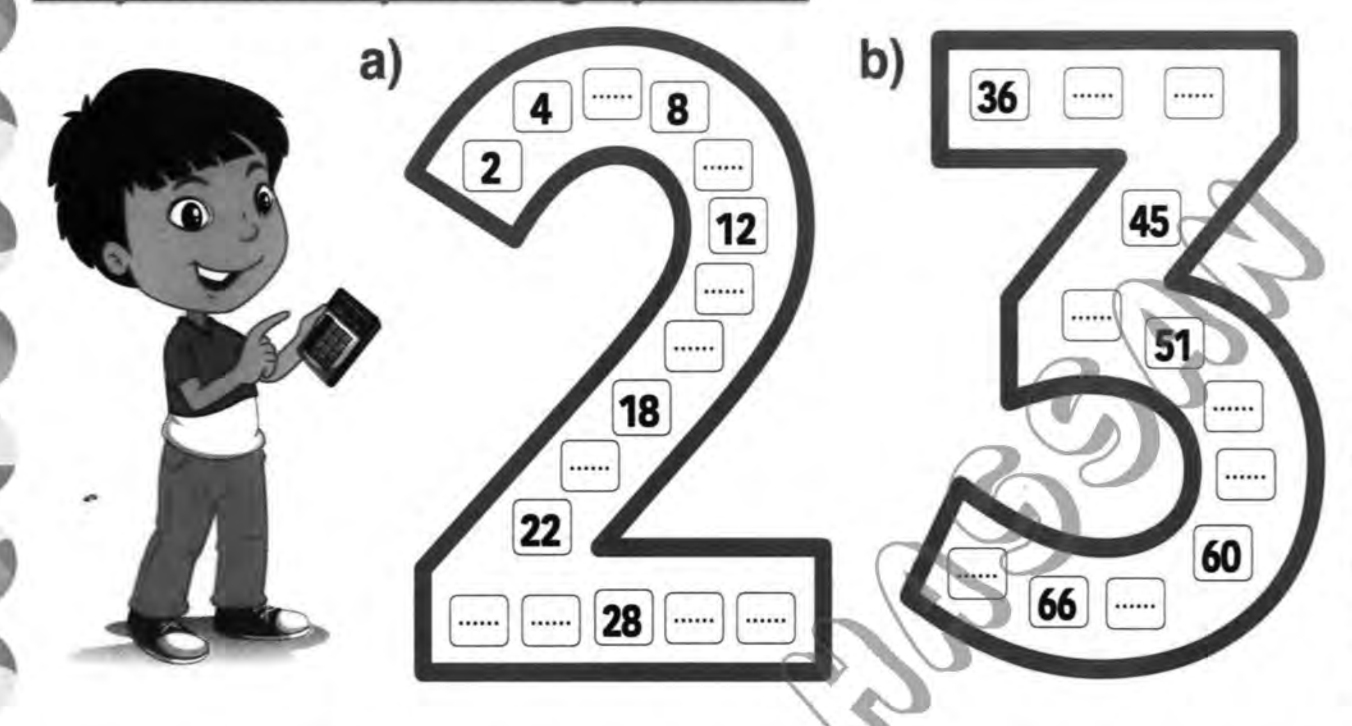
6. Each pack of pencils contains 8 pencils. How many pencils are in 3 packs?

Work Space:

Multiplication equation: ______________________________

Lesson 23: Multiples of 2 and 3

Complete the skip counting by 2 & 3:



Color the multiples of 2 and multiples of 3 on the 120 chart, then write the first ten of them:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

a) List the first **10** multiples of **2**.

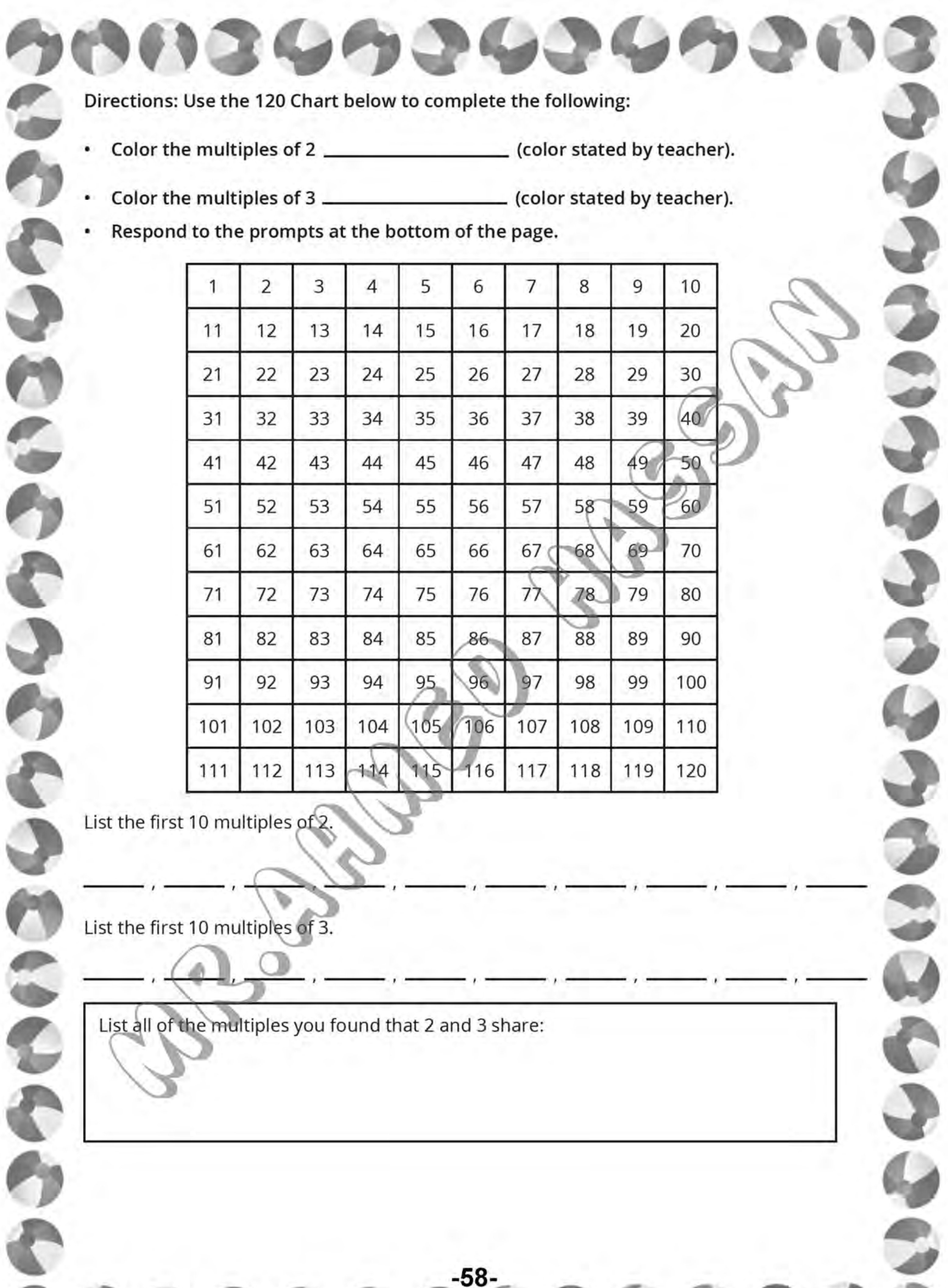
....

....

b) List the first 10 multiples of **3**.

....

....



Directions: Use the 120 Chart below to complete the following:

- Color the multiples of 2 ____________________ (color stated by teacher).
- Color the multiples of 3 ____________________ (color stated by teacher).
- Respond to the prompts at the bottom of the page.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

List the first 10 multiples of 2.

_______ , _______ , _______ , _______ , _______ , _______ , _______ , _______ , _______ , _______

List the first 10 multiples of 3.

_______ , _______ , _______ , _______ , _______ , _______ , _______ , _______ , _______ , _______

List all of the multiples you found that 2 and 3 share:

CHECK What You Know

Multiply.

1. $\begin{array}{r} 6 \\ \times 0 \\ \hline \end{array}$

2. $\begin{array}{r} 1 \\ \times 7 \\ \hline \end{array}$

3. $\begin{array}{r} 5 \\ \times 0 \\ \hline \end{array}$

4. $\begin{array}{r} 8 \\ \times 1 \\ \hline \end{array}$

5. There is 1 student sitting at each of the 9 tables in the cafeteria. How many students are there altogether?

Find the product.

1. $1 \times 4 =$ 4
2. $0 \times 8 =$ ____
3. $0 \times 4 =$ ____
4. $1 \times 6 =$ ____
5. $3 \times 0 =$ ____
6. $0 \times 9 =$ ____
7. $8 \times 1 =$ ____
8. $1 \times 2 =$ ____
9. $10 \times 1 =$ ____
10. $2 \times 0 =$ ____
11. $5 \times 1 =$ ____
12. $1 \times 0 =$ ____
13. $0 \times 0 =$ ____
14. $1 \times 3 =$ ____
15. $9 \times 0 =$ ____
16. $1 \times 1 =$ ____

Problem Solving Real World

17. Peter is in the school play. His teacher gave 1 copy of the play to each of 6 students. How many copies of the play did the teacher hand out?

18. There are 4 egg cartons on the table. There are 0 eggs in each carton. How many eggs are there in all?

19. WRITE *Math* One group has 5 people, and each person has 1 granola bar. Another group has 5 people, and each person has 0 granola bars. Which group has more granola bars? Explain.

Lesson 24: Multiples of 5 and 10

Write the missing multiples:

a)

0 | 5 | ..... | 15 | ..... | ..... | 30 | ..... | 40 | ..... | 50

b)

0 | 10 | ..... | ..... | 40 | ..... | 60 | ..... | ..... | 90 | 100

c)

25 | ☐ | 35 | 40 | ☐ | ☐ | 55 | ☐ | ☐ | 70

d)

30 | ..... | 50 | ..... | 70 | ..... | ..... | 100 | ..... | 120

Multiply with 5 and 10

Find the product.

1. $5 \times 7 =$ 35 **2.** $5 \times 1 =$ ______ **3.** $2 \times 10 =$ ______ **4.** ______ $= 8 \times 5$

5. $1 \times 10 =$ ______ **6.** ______ $= 4 \times 5$ **7.** $5 \times 10 =$ ______ **8.** $7 \times 5 =$ ______

9. $\begin{array}{r} 5 \\ \times\ 6 \\ \hline \end{array}$ **10.** $\begin{array}{r} 10 \\ \times\ 7 \\ \hline \end{array}$ **11.** $\begin{array}{r} 5 \\ \times\ 3 \\ \hline \end{array}$ **12.** $\begin{array}{r} 10 \\ \times\ 4 \\ \hline \end{array}$

13. $\begin{array}{r} 5 \\ \times\ 0 \\ \hline \end{array}$ **14.** $\begin{array}{r} 10 \\ \times\ 8 \\ \hline \end{array}$ **15.** $\begin{array}{r} 5 \\ \times\ 2 \\ \hline \end{array}$ **16.** $\begin{array}{r} 10 \\ \times\ 6 \\ \hline \end{array}$

Problem Solving Real World

17. Ginger takes 10 nickels to buy some pencils at the school store. How many cents does Ginger have to spend?

____

18. The gym at Evergreen School has three basketball courts. There are 5 players on each of the courts. How many players are there?

____

19. WRITE ▸ *Math* Michelle bought some pinwheels for a dollar and paid in dimes. How many dimes did she use? Explain.

____

____

Facts Practice

Find the product as fast as you can. Multiply.

1. 4×6

2. 10×5

3. 0×9

4. 2×9

5. 4×8

6. 2×3

7. 10×8

8. 0×6

9. 1×9

10. 5×5

11. 4×0

12. 2×7

13. 10×0

14. 5×3

15. 1×6

16. 2×10

17. 4×5

18. 2×2

19. 1×1

20. 5×8

21. 4×3

22. 10×1

23. 0×3

24. 4×9

25. 0×8

26. 10×7

27. 1×4

28. 2×6

29. 5×10

30. 0×7

31. 1×0

32. 10×6

33. 4×7

34. 5×6

35. 10×3

36. 2×0

37. 10×10

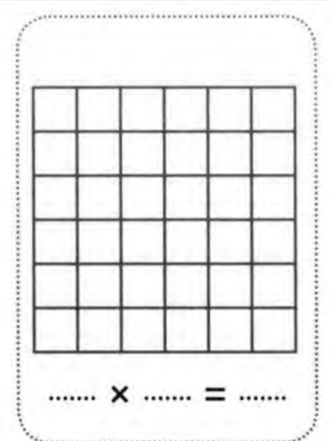
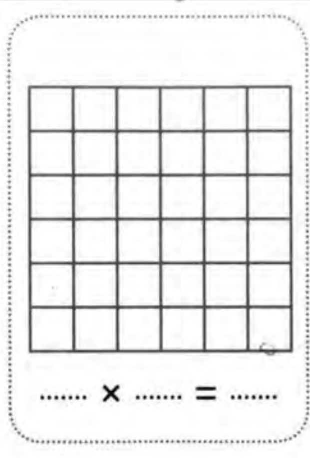
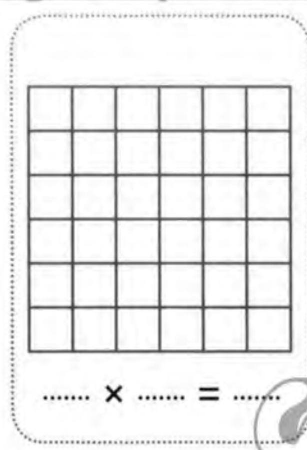
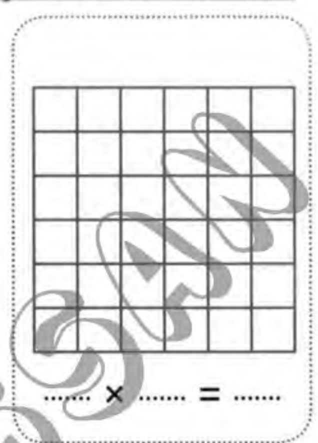
38. 0×10

39. 1×5

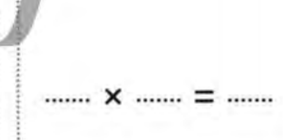
40. 0×4

Lesson 25: The Factors

Color the factors of 6 by drawing arrays to represent them:

.... × .... = ... × .... = ... × .... = ... × .... = ...

Find the factors of 10 by drawing arrays of  to represent them:



.... × .... = ... × .... = ... × .... = ... × .... = ...

So, the factors of number 10 are .... , ... , ... and ....

Lessons 26-27: Read and write digital time

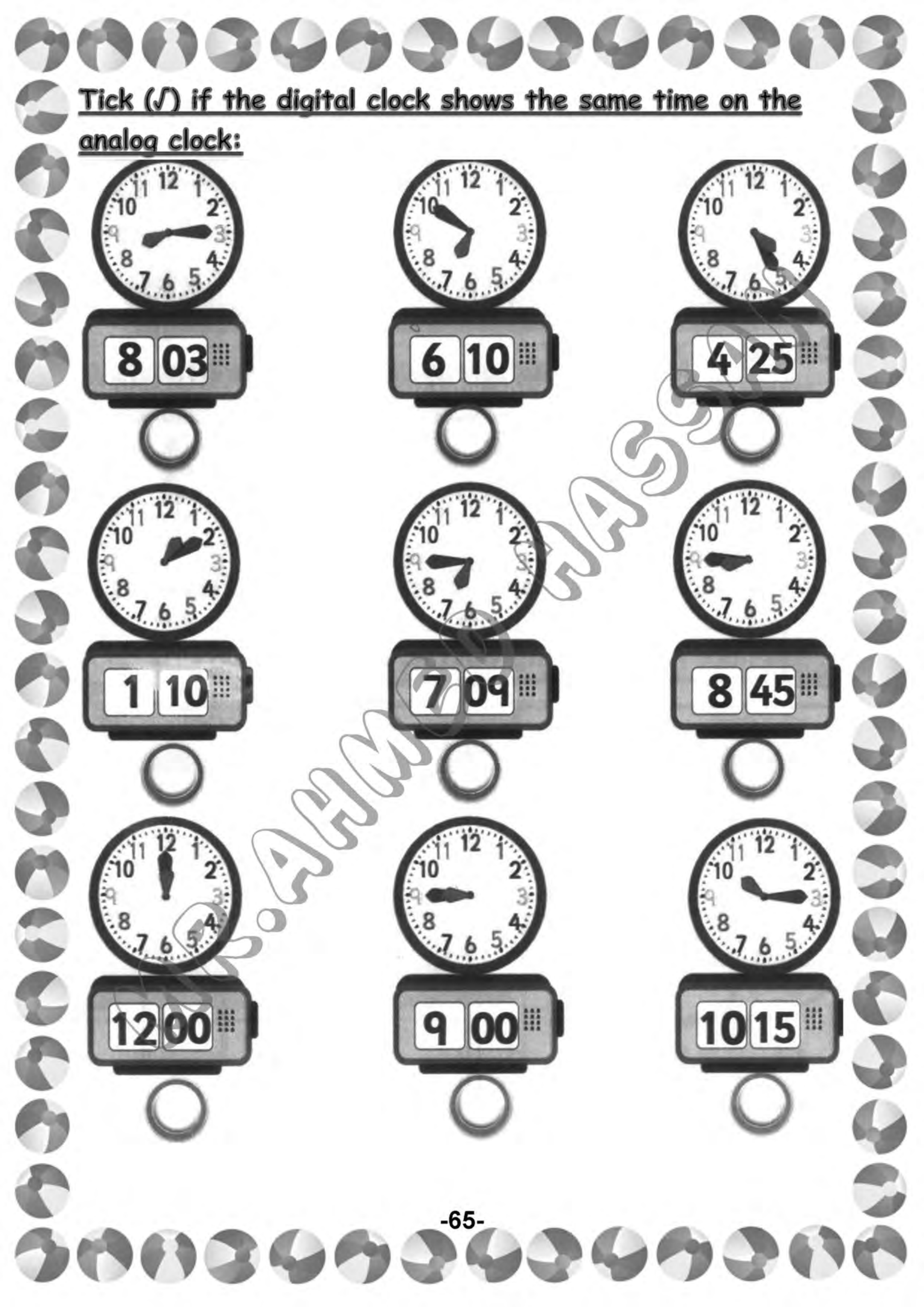
Match each analog clock with its digital time:

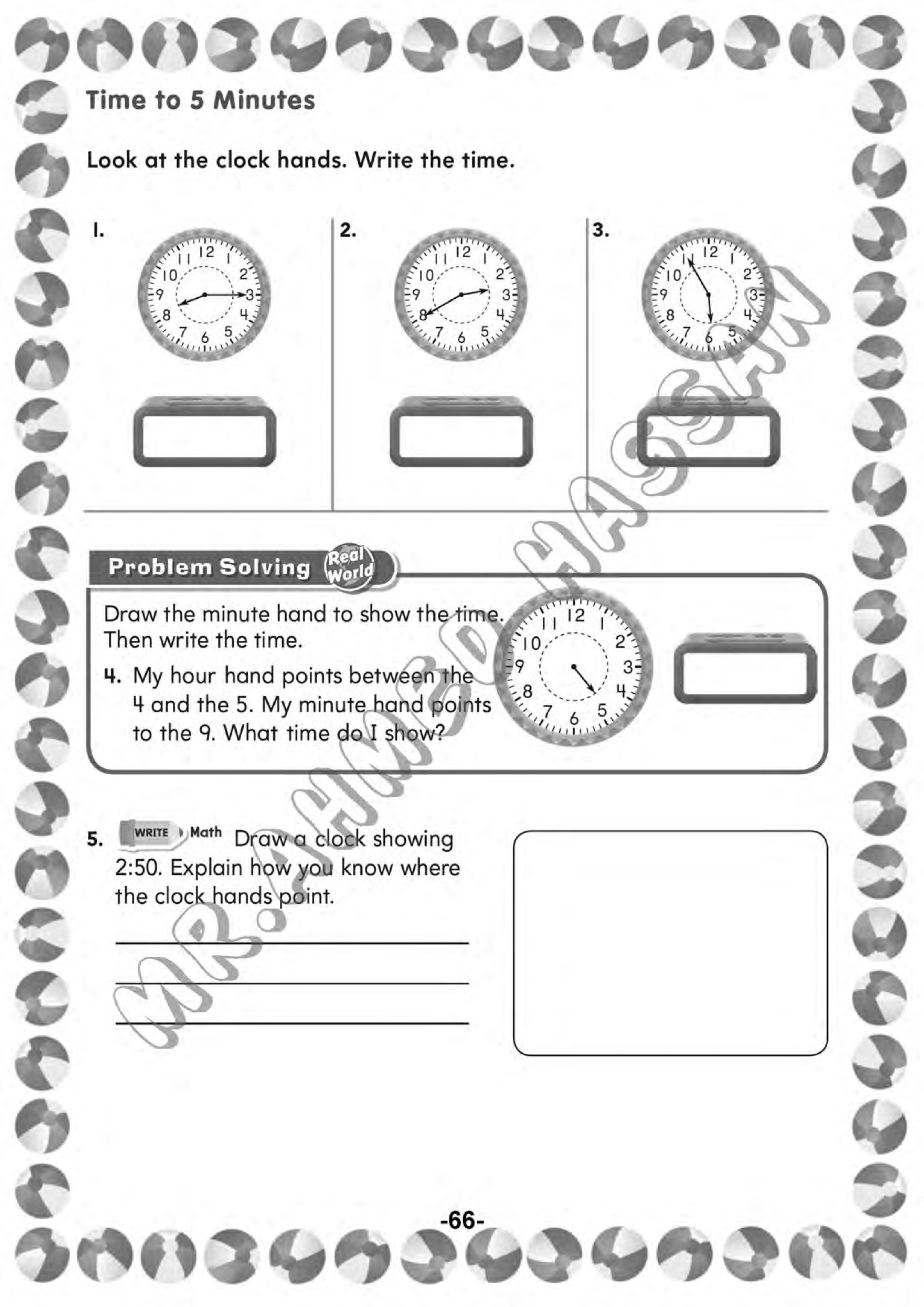
a) b) c) d) e)

Digital time
7 15
2 30
11 45
1 15
5 30
12 45
4 00
6 15
10 30
3 45

1) 2) 3) 4) 5)

Tick (√) if the digital clock shows the same time on the analog clock:





Time to 5 Minutes

Look at the clock hands. Write the time.

1.

2.

3.

Problem Solving Real World

Draw the minute hand to show the time. Then write the time.

4. My hour hand points between the 4 and the 5. My minute hand points to the 9. What time do I show?

5. WRITE Math Draw a clock showing 2:50. Explain how you know where the clock hands point.

Guided Practice

Tell what time it will be.

1. in 3 hours



2. in 20 minutes



3. in 45 minutes



Ask Yourself

- At what time do I start counting?
- Do I need to count hours?
- Do I need to count minutes?

Explain Your Thinking ▶ Visiting hours at the animal shelter are from 9:00 A.M. to 11:30 A.M. on Saturday. How long is that?

Practice and Problem Solving

Tell what time it will be.

4. in 5 minutes



5. in 35 minutes

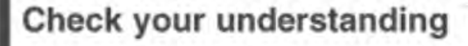


6. in 1 hour

7. in 3 hours







Check your understanding

Write the time in at least two ways.

1.



2.



3.



4. 12:35

Write how much time has passed.

5. A game starts at 4:30 P.M.
   It ends at 6:00 P.M.
6. A phone call starts at 11:05 A.M.
   It ends at 11:17 A.M.
7. A movie starts at 7:30 P.M.
   It ends at 8:45 P.M.
8. A meeting starts at 11:30 A.M.
   It ends at 1:15 P.M.

Share and Show MATH BOARD

1. **Find the elapsed time.**

from 1:15 P.M. to 1:40 P.M. ___________

Find the elapsed time.

2. Start: 11:35 A.M. End: 11:55 A.M.

____

3. Start: 4:20 P.M. End: 5:00 P.M.

____

On Your Own

MATHEMATICAL PRACTICE 5 Use Appropriate Tools **Find the elapsed time.**

4. Start: 8:35 P.M. End: 8:55 P.M.

____

5. Start: 10:10 A.M. End: 10:40 A.M.

____

6. Start: 9:25 A.M. End: 9:40 A.M.

____

7. Start: 2:15 P.M. End: 2:50 P.M.

____

Measure Time Intervals

Find the elapsed time.

1. Start: 8:10 A.M. End: 8:45 A.M.



35 minutes

2. StArt: 6:45 P.M. End: 6:50 P.M.



3. StArt: 3:00 P.M. End: 3:35 P.M.



4. StArt: 5:20 A.M. End: 5:45 A.M.



Problem Solving Real World

5. A show at the museum starts at 7:40 P.M. And ends At 7:55 P.M. How long is the show?

6. The first train leaves the station at 6:15 A.M. The second train leaves at 6:55 A.M. How much later does the second train leave the station?

7. WRITE Math Describe two different methods to find tThe elApsed tfiMe froM 2:30 P.M. to 2:55 P.M.

CHALLENGE: Time Story Problems

1. Your mom puts muffins in the oven at 7:00. When you take them out, the clock looks like this:



How many minutes did it take to bake the muffins?

2. You leave school at 3:00 and when you get home the clock looks like this:

How many minutes did it take you to walk home?

3. If it takes you 45 minutes to walk home from school and you leave at 3:00, what time will it be when you get home? Draw the time on the clock.

Lessons 28-29: Dividing into equal groups

Draw a circle around the correct number of stars to show each division problem. Complete each number sentence.

1. 8 ÷ 2 = 4



2. 6 ÷ 3 = ______





3. 12 ÷ 3 = ______



4. 10 ÷ 2 = ______












5. 18 ÷ 3 = ______



6. 9 ÷ 3 = ______










7. 16 ÷ 2 = ______

8. 15 ÷ 3 = ______

ACTIVITY

2 Group 12 counters 3 at a time. How many groups are there?

Step 1 Count out 12 counters.

Step 2 Make equal groups of 3 until all the counters are gone.

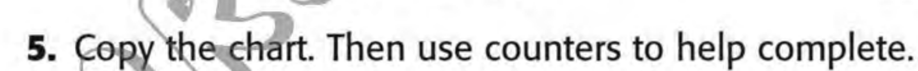
There are 4 equal groups of 3.
So, $12 \div 4 = 3$.

Think About It

1. Explain how you divided 12 counters into equal groups.
2. When you divided the counters into groups of 3, how did you find the number of equal groups?

CHECK What You Know

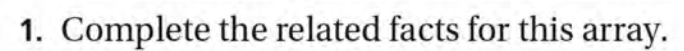
3. Make equal groups to find the number of counters in each group.
4. Find the number of equal groups of 5.



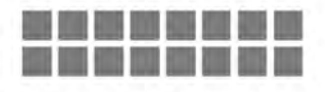
5. Copy the chart. Then use counters to help complete.

Number of Counters	Number of Equal Groups	Number in Each Group	Division Sentence
9	3	3	$9 \div 3 = 3$
14	2		
15		5	
6		3	

Lesson 30: The relation between multiplication and dividision



1. Complete the related facts for this array.

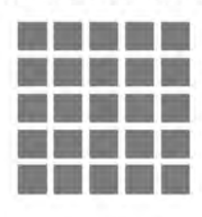


$2 \times 8 = 16$ $16 \div 2 = 8$

________ ________

Write the related facts for the array.

2.



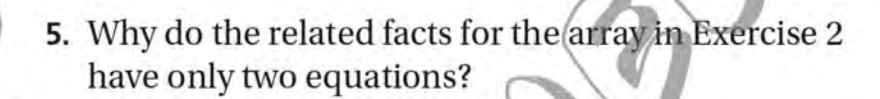
3.



4.



5. Why do the related facts for the array in Exercise 2 have only two equations?



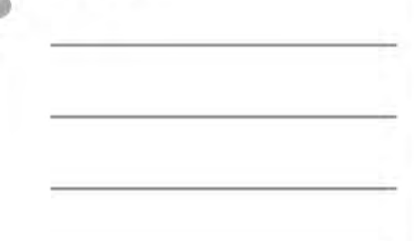
____

Write the related facts for the set of numbers.

6. 2, 5, 10

7. 3, 8, 24

8. 6, 6, 36



Complete the related facts.

9.
$4 \times 7 =$ ____
$7 \times$ ____ $= 28$
$28 \div$ ____ $= 4$
$28 \div 4 =$ ____

10.
$5 \times$ ____ $= 30$
$6 \times$ ____ $= 30$
$30 \div 6 =$ ____
$30 \div 5 =$ ____

11.
____ $\times 9 = 27$
____ $\times 3 = 27$
____ $\div 9 = 3$
$27 \div$ ____ $= 9$

Complete the equations.

1. 

5 rows of 4 = 20

$5 \times$ 4 $= 20$

$20 \div 5 =$ 4

2. 

4 rows of _____ = 24

$4 \times$ ______ $= 24$

$24 \div 4 =$ ______

3. 

3 rows of _____ = 24

$3 \times$ ______ $= 24$

$24 \div 3 =$ ______

Complete the equations.

4. $4 \times$ ______ $= 28$ $28 \div 4 =$ ______

5. $6 \times$ ______ $= 36$ $36 \div 6 =$ ______

6. $4 \times$ ______ $= 36$ $36 \div 4 =$ ______

7. $8 \times$ ______ $= 40$ $40 \div 8 =$ ______

Problem Solving Real World

8. Mr. Martin buys 36 muffins for a class breakfast. He places them on plates for his students. If he places 9 muffins on each plate, how many plates does Mr. Martin use?

____

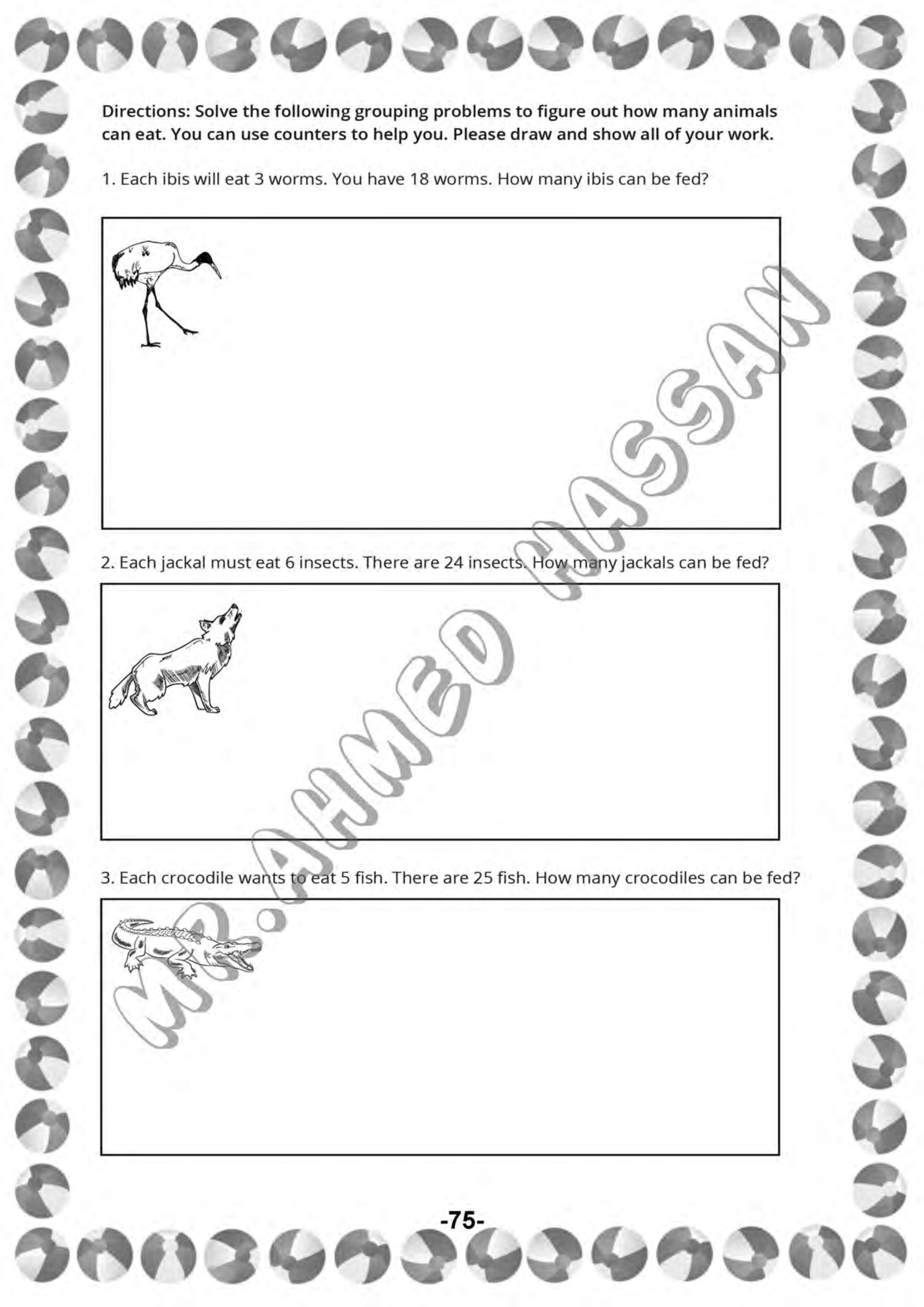
9. Ralph read 18 books during his summer vacation. He read the same number of books each month for 3 months. How many books did he read each month?

____

10. WRITE Math Use examples to show that multiplication and division are inverse operations.

____

____



Directions: Solve the following grouping problems to figure out how many animals can eat. You can use counters to help you. Please draw and show all of your work.

1. Each ibis will eat 3 worms. You have 18 worms. How many ibis can be fed?

2. Each jackal must eat 6 insects. There are 24 insects. How many jackals can be fed?

3. Each crocodile wants to eat 5 fish. There are 25 fish. How many crocodiles can be fed?

Directions: Find the missing factor in the triangles below. Then write the four equations that go with the fact family. Use the counters to help you.

24

6 ◯

______ × ______ = ______

______ × ______ = ______

______ ÷ ______ = ______

______ ÷ ______ = ______

18

3 ◯

______ × ______ = ______

______ × ______ = ______

______ ÷ ______ = ______

______ ÷ ______ = ______

28

4 ◯

______ × ______ = ______

______ × ______ = ______

______ ÷ ______ = ______

______ ÷ ______ = ______

21

7 ◯

______ × ______ = ______

______ × ______ = ______

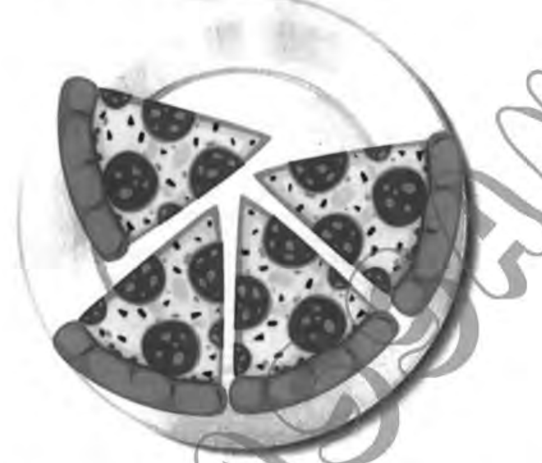
______ ÷ ______ = ______

______ ÷ ______ = ______

Exercises on chapter3

1 **Form the multiplication equation of the problem:**





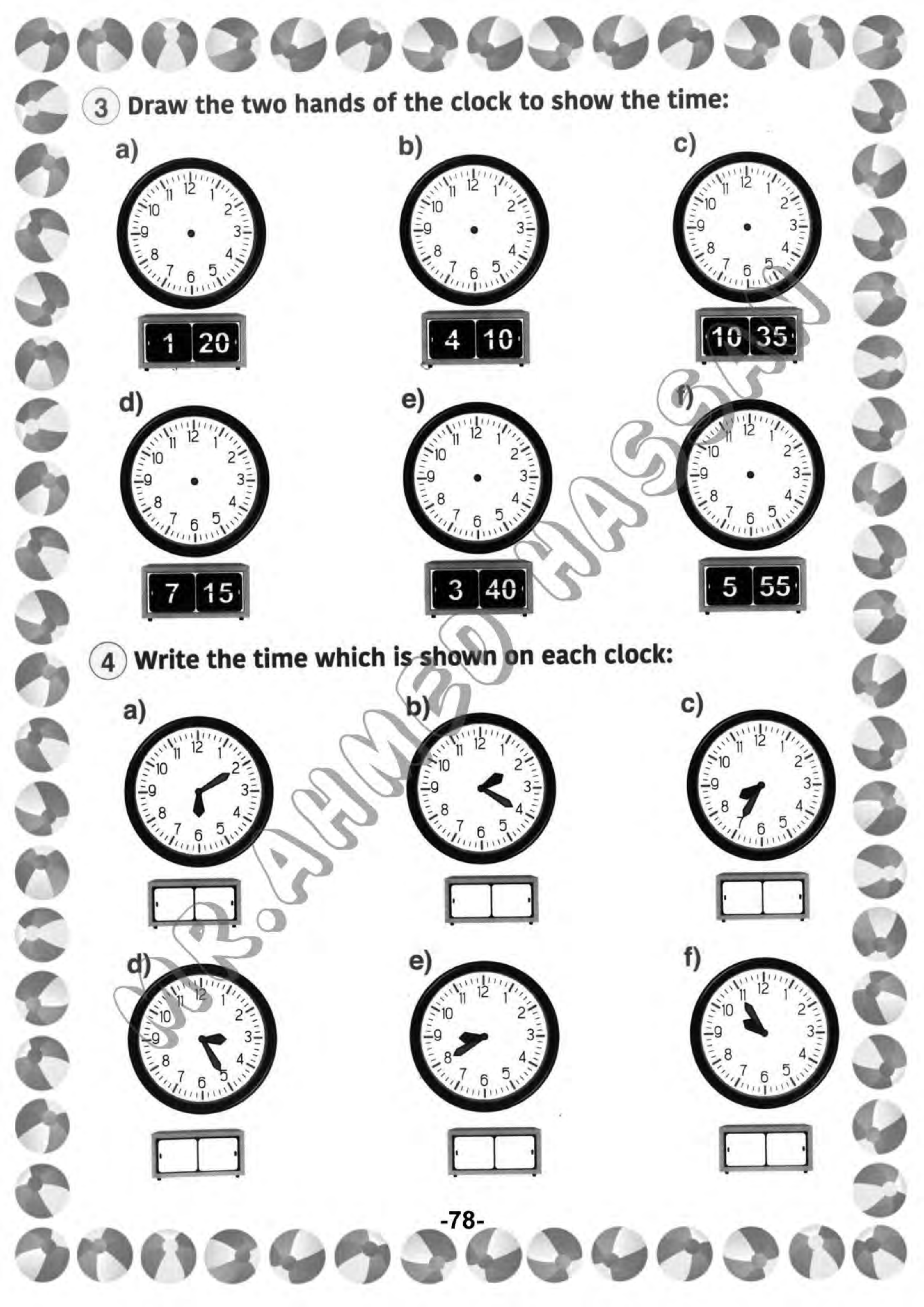
Ahmed packed the pieces of pizza into [........] groups, each one has [........] pieces of pizza.

Then the multiplication equation is: [........] × [........] = [........]

2 **Form the multiplication equation to calculate the number of fish in all fishbowl:**



The multiplication equation is: [........] × [........] = [........]



3 Draw the two hands of the clock to show the time:

a) 1 20

b) 4 10

c) 10 35

d) 7 15

e) 3 40

f) 5 55

4 Write the time which is shown on each clock:

a)

b)

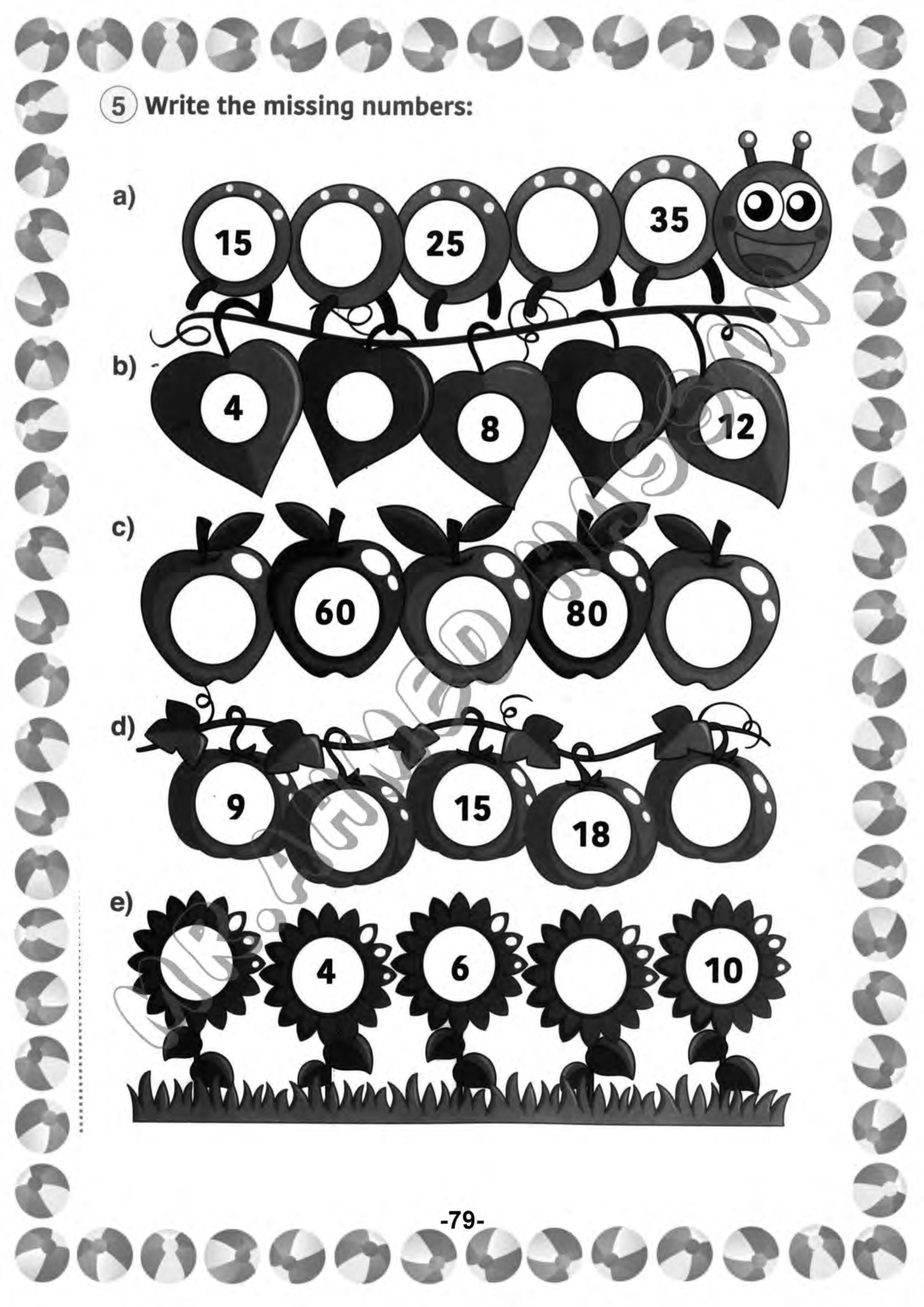
c)

d)

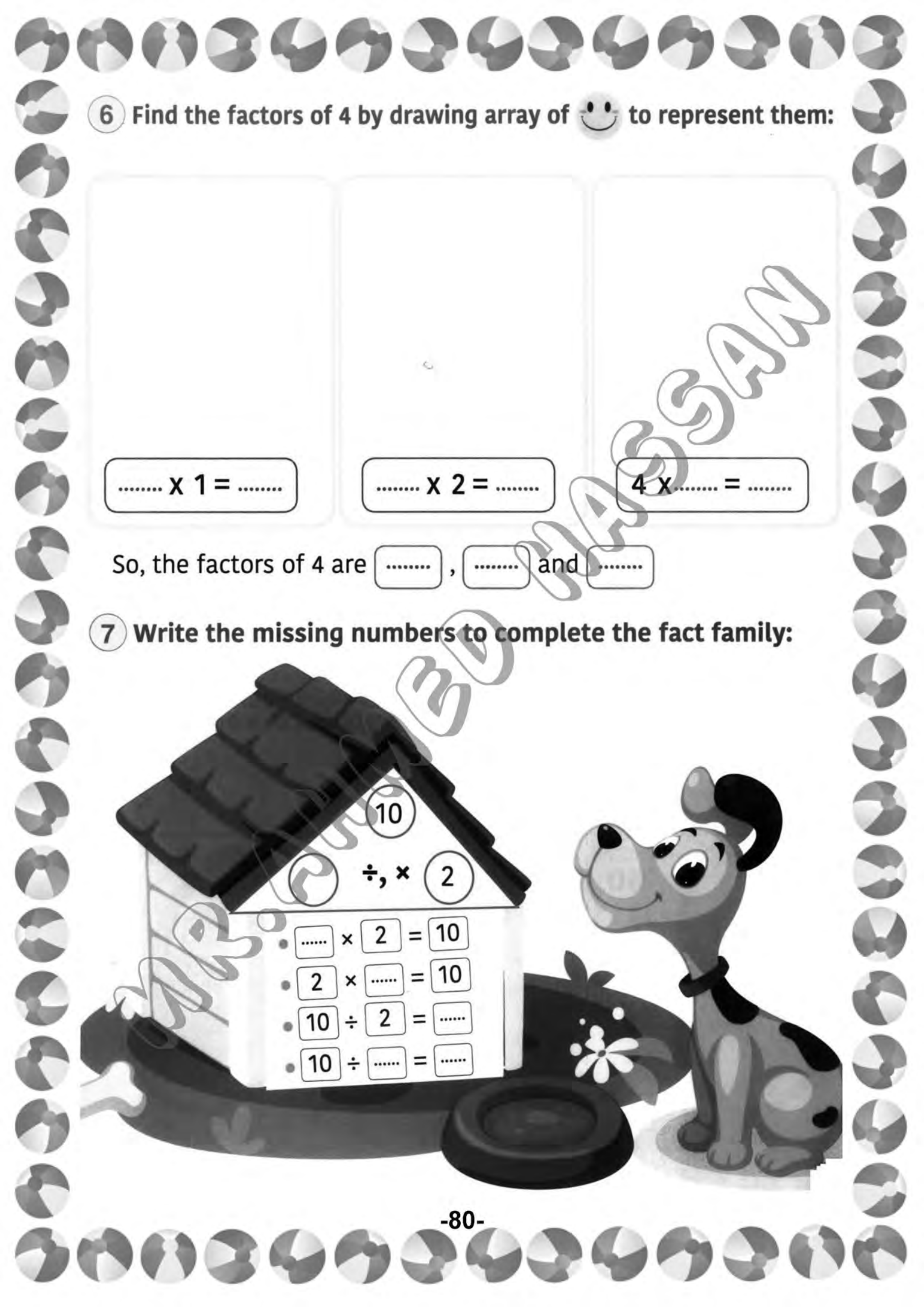
e)

f)

5 Write the missing numbers:



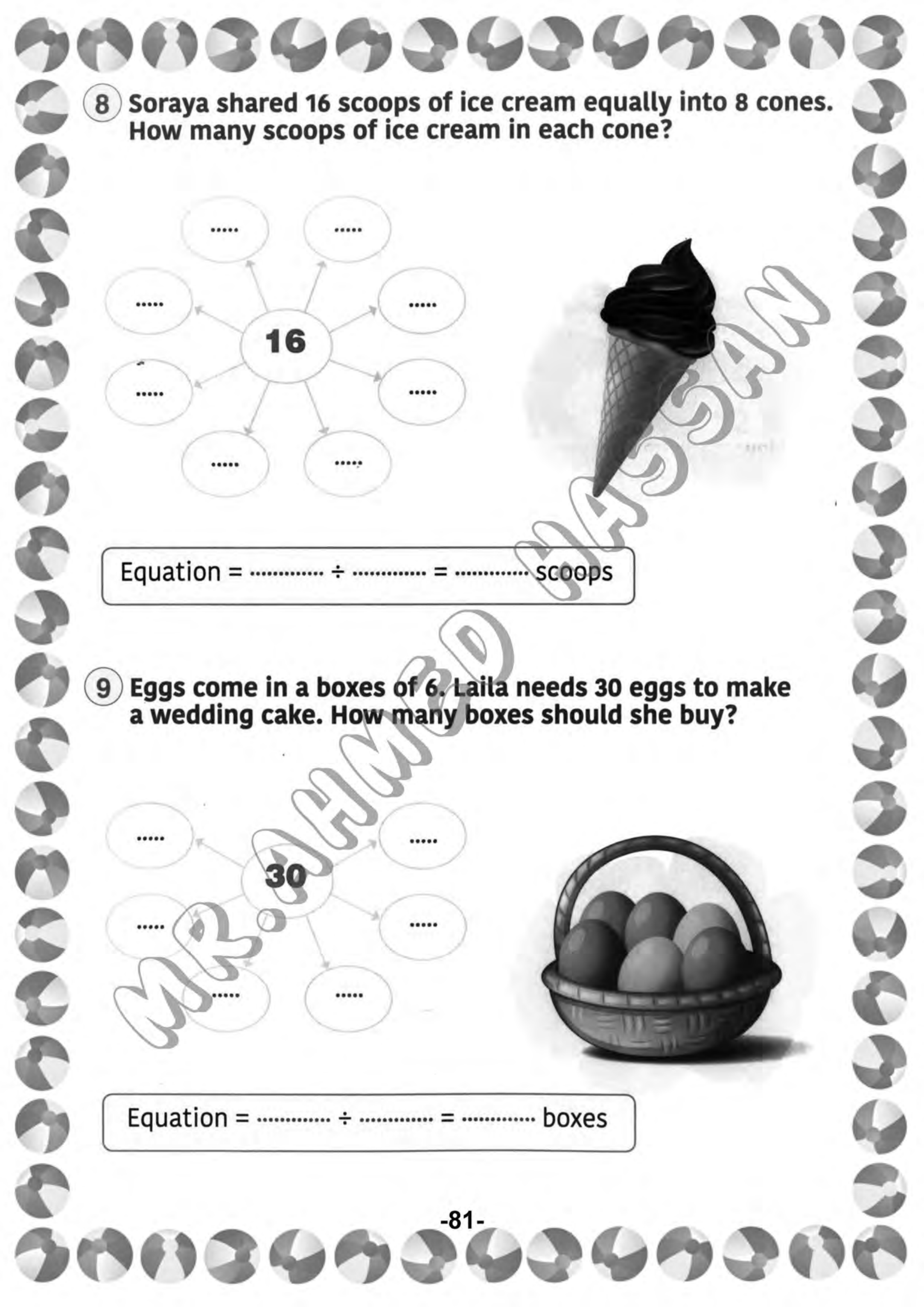
⑥ **Find the factors of 4 by drawing array of 🙂 to represent them:**



.... x 1 = ...	.... x 2 = ...	4 x .... = ...

So, the factors of 4 are .... , ... and ....

⑦ **Write the missing numbers to complete the fact family:**



8) **Soraya shared 16 scoops of ice cream equally into 8 cones. How many scoops of ice cream in each cone?**

16 → ....

Equation = ... ÷ .... = ... scoops

9) **Eggs come in a boxes of 6. Laila needs 30 eggs to make a wedding cake. How many boxes should she buy?**

30 → ....

Equation = ... ÷ .... = ... boxes

Additional Exercises

1 Complete:

1- .... is a multiple of 8.

2- 36 is a multiple of ....

3- ...., ... are common multiples of 2 and 3.

4- .... is a common multiple of 2, 3, 6.

5- When the minute hand points to 7, the number of minutes it represents is = ... minutes

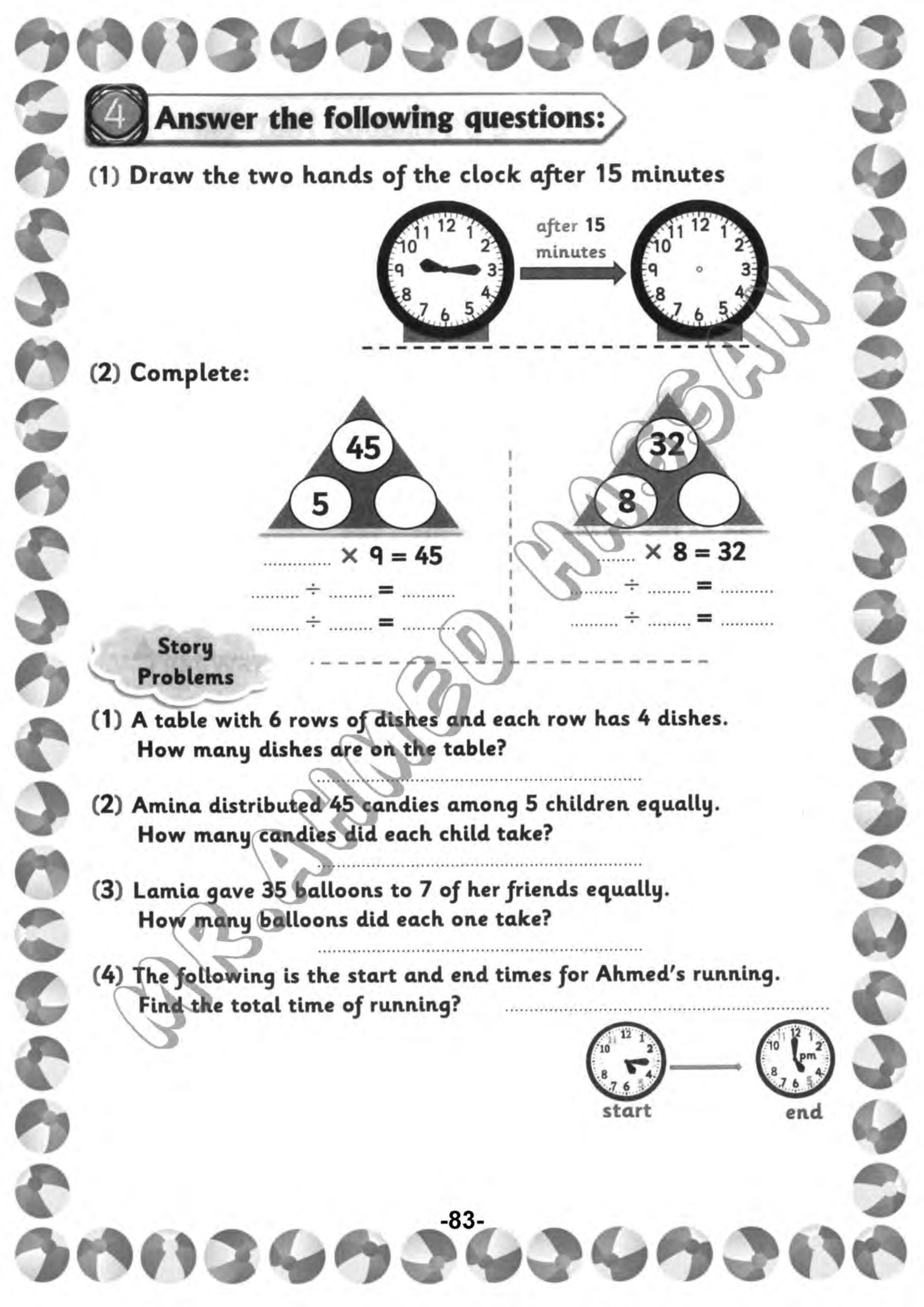
6- If the time is 8:15, that means the minute hand points to number .... on the clock.

2 Write the missing numbers:

36 ÷ 4 = ...	48 ÷ 6 = ...	4 × 6 = ...
7 × 8 = ...	32 ÷ 8 = ...	28 ÷ .... = 7
.... × 9 = 18	.... × 4 = 12	.... ÷ 4 = 5

3 Write the time:





4 Answer the following questions:

(1) Draw the two hands of the clock after 15 minutes

after 15 minutes

(2) Complete:

45, 5, ( )

32, 8, ( )

.... × 9 = 45

.... ÷ .... = ...

.... ÷ .... = ...

.... × 8 = 32

.... ÷ .... = ...

.... ÷ .... = ...

Story Problems

(1) A table with 6 rows of dishes and each row has 4 dishes.
How many dishes are on the table?

....

(2) Amina distributed 45 candies among 5 children equally.
How many candies did each child take?

....

(3) Lamia gave 35 balloons to 7 of her friends equally.
How many balloons did each one take?

....

(4) The following is the start and end times for Ahmed's running.
Find the total time of running? ....

start → end (pm)

Lesson 31: Polygons

Complete:

1) The shapes with 4 vertices and 4 sides are called ....

2) The shape with 4 equal sides and not a square is called ....

3) The shape with only 2 parallel sides is called ....

4) The shape with 2 short equal sides and 2 long equal sides is called ....

5) The trapezium is a quadrilateral because it has .... sides and .... vertices.

6) The number of sides of the ⬠ = ... sides.

7) Any shape consisting of 3 sides or more is called ....

8) The rectangle and square are .... -dimensional shapes.

9) The shape ▭ has .... vertices.

Color the quadrilaterals in red:

CHECK What You Know

Classify each polygon.

1.

2.

3.

4.

5. NO PASSING ZONE

6. REST AREA 2 km

7. Bryson drew a square. Then he drew a triangle on top of it. What is the new polygon called?

8. Talk About It Explain why the shape of the tamborine is not a polygon.

Practice and Problem Solving

EXTRA PRACTICE See page R26.

Classify each polygon.

9.

10.

11.

12.

13.

14.

15. What is the shape of a door?

16. What three-sided polygon do you get when you fold a square in half, corner to corner?

Lesson 32: Quadrilaterals

Sort the following quadrilaterals, then fill the Venn diagram by drawing each shape:

Each 2 opposite sides are equal

4 vertices are the same

- Which quadrilateral has 4 equal sides and 4 vertices that are the same? ....

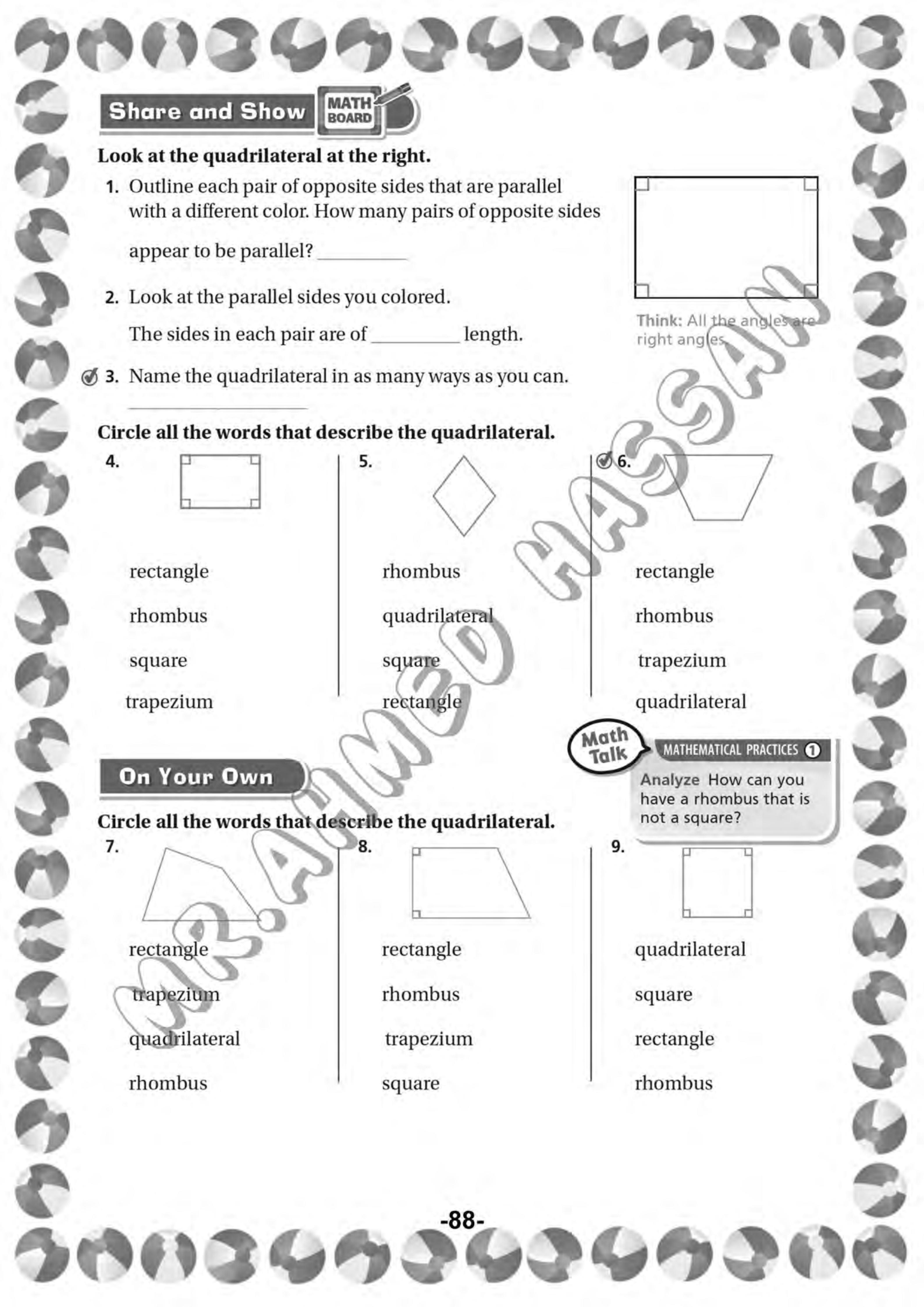
Lesson 33: Trapezium

Color as required:

a) The quadrilateral of only two parallel sides in red.

b) The quadrilateral in which each two opposite sides are equal and parallel in green.

c) The shapes that are not polygons in yellow.



Share and Show MATH BOARD

Look at the quadrilateral at the right.

1. Outline each pair of opposite sides that are parallel with a different color. How many pairs of opposite sides appear to be parallel? ________

2. Look at the parallel sides you colored.

   The sides in each pair are of ________ length.

3. Name the quadrilateral in as many ways as you can.

   ____

Think: All the angles are right angles.

Circle all the words that describe the quadrilateral.

4.
rectangle
rhombus
square
trapezium

5.
rhombus
quadrilateral
square
rectangle

6.
rectangle
rhombus
trapezium
quadrilateral

Math Talk — MATHEMATICAL PRACTICES 1

Analyze How can you have a rhombus that is not a square?

On Your Own

Circle all the words that describe the quadrilateral.

7.
rectangle
trapezium
quadrilateral
rhombus

8.
rectangle
rhombus
trapezium
square

9.
quadrilateral
square
rectangle
rhombus

Classify Quadrilaterals

Circle all the words that describe the quadrilateral.

1.	2.	3.
square	square	square
rectangle	rectangle	rectangle
rhombus	rhombus	rhombus
trapezium	trapezium	trapezium

Use the quadrilaterals below for 4–6.

A B C D E

4. Which quadrilaterals appear to have no right angles?

____

5. Which quadrilaterals appear to have 4 right angles?

____

6. Which quadrilaterals appear to have 4 sides of equal length?

____

Problem Solving Real World

7. A picture on the wall in Jeremy's classroom has 4 right angles, 4 sides of equal length, and 2 pairs of opposite sides that are parallel. What quadrilateral best describes the picture?

____

Problem Solving • Classify Plane Shapes

Essential Question How can you use the strategy *draw a diagram* to classify plane shapes?

Unlock the Problem

Real World

A **Venn diagram** shows how sets of things are related. In the Venn diagram at the right, one circle has shapes that are rectangles. Shapes that are rhombuses are in the other circle. The shapes in the section where the circles overlap are both rectangles and rhombuses.

Rectangles Rhombuses

What type of quadrilateral is in both circles?

Read the Problem	Solve the Problem
What do I need to find? ______________________ ______________________	What is true about all quadrilaterals? ______________________ Which quadrilaterals always have 2 pairs of opposite sides that are parallel? ______________________
What information do I need to use? the circles labeled ________ and ________	Which quadrilaterals always have 4 sides of equal length? ________________ Which quadrilaterals always have 4 right angles? ________________
How will I use the information? ______________________ ______________________ ______________________	The quadrilaterals in the section where the circles overlap always have _____ pairs of opposite sides that are parallel, _____ sides of equal length, and _____ right angles. So, __________ are in both circles.

Math Talk MATHEMATICAL PRACTICES 1

Make Sense of Problems Does a ⏢ fit in the Venn diagram? Explain.

Try Another Problem

The Venn diagram shows the shapes Andrea used to make a picture. Where would the shape shown below be placed in the Venn diagram?

Quadrilaterals

Polygons with Right Angles

Read the Problem	Solve the Problem
What do I need to find?	**Record the steps you used to solve the problem.**
What information do I need to use?	
How will I use the information?	

1. How many shapes do not have right angles?

____

2. How many red shapes have right angles but are not quadrilaterals? _______________

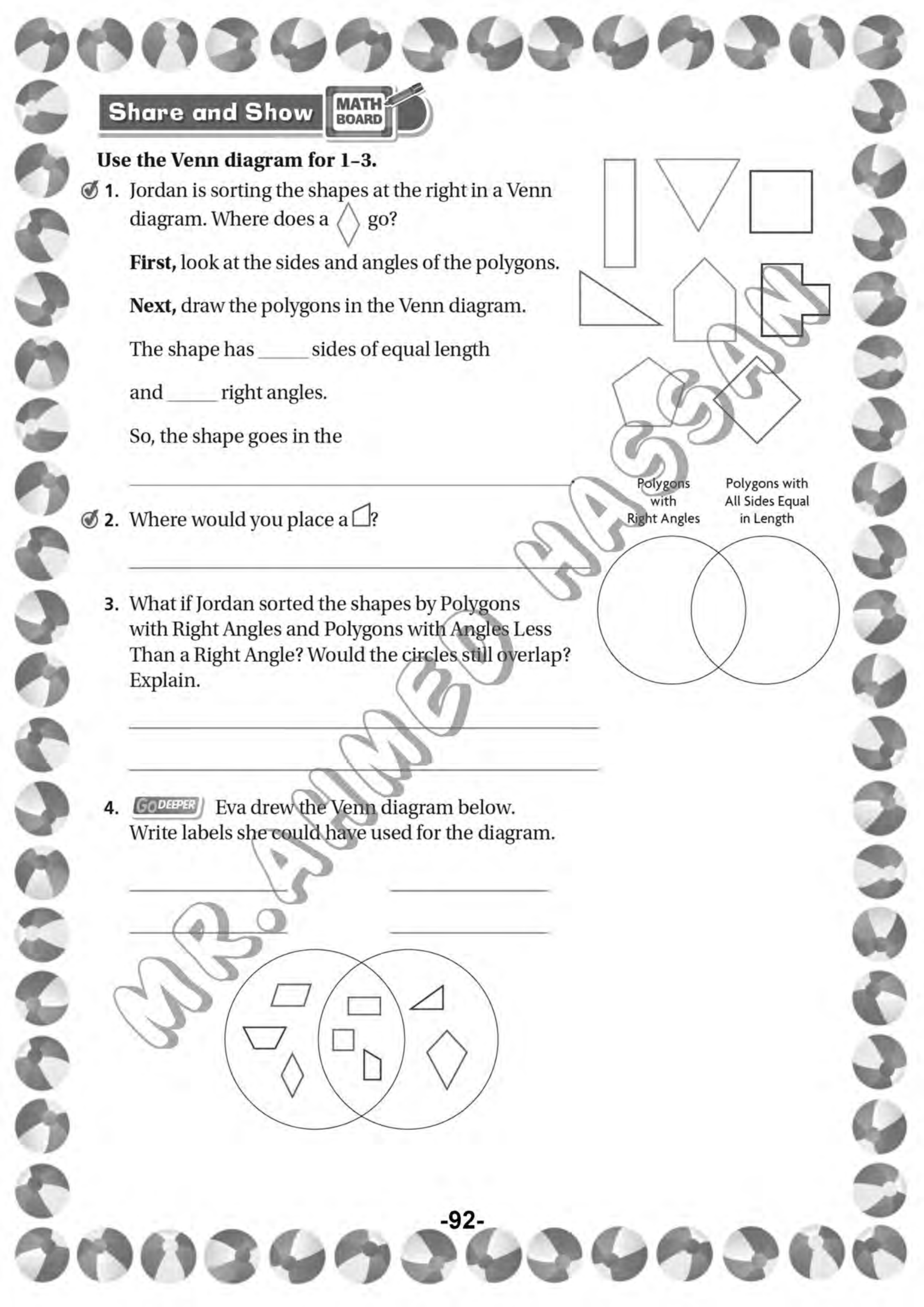
3. MATHEMATICAL PRACTICE 2 **Reason Abstractly** What is a different way to sort the shapes?

____

____

Math Talk MATHEMATICAL PRACTICES 1

Make Sense of Problems What name can be used to describe all the shapes in the Venn diagram? Explain how you know.



Share and Show MATH BOARD

Use the Venn diagram for 1–3.

1. Jordan is sorting the shapes at the right in a Venn diagram. Where does a ◇ go?

   First, look at the sides and angles of the polygons.

   Next, draw the polygons in the Venn diagram.

   The shape has _____ sides of equal length

   and _____ right angles.

   So, the shape goes in the

   ______________________________________.

2. Where would you place a ⌂?

   ____

3. What if Jordan sorted the shapes by Polygons with Right Angles and Polygons with Angles Less Than a Right Angle? Would the circles still overlap? Explain.

   ____

   ____

4. GO DEEPER Eva drew the Venn diagram below. Write labels she could have used for the diagram.

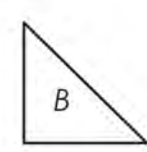
   ________________ ________________

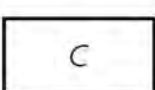
   ________________ ________________

Solve each problem.

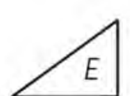
1. Steve drew the shapes below. Write the letter of each shape where it belongs in the Venn diagram.







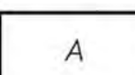


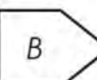


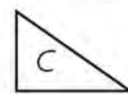
Triangle **Right Angle**

A | B, E | C, D

2. Janice drew the shapes below. Write the letter of each shape where it belongs in the Venn diagram.









Right Angle **All Sides of Equal Length**

3. WRITE Math Draw a Venn diagram with one circle labeled *Quadrilaterals* and the other circle labeled *Polygons with More Than 3 Sides.* Draw at least two shapes in each section of the diagram. Explain why you drew the shapes you chose in the overlapping section

____

____

Lesson Check

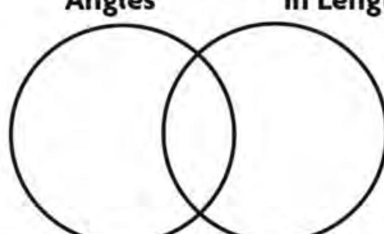
1. What shape would go in the section where the two circles overlap?

____

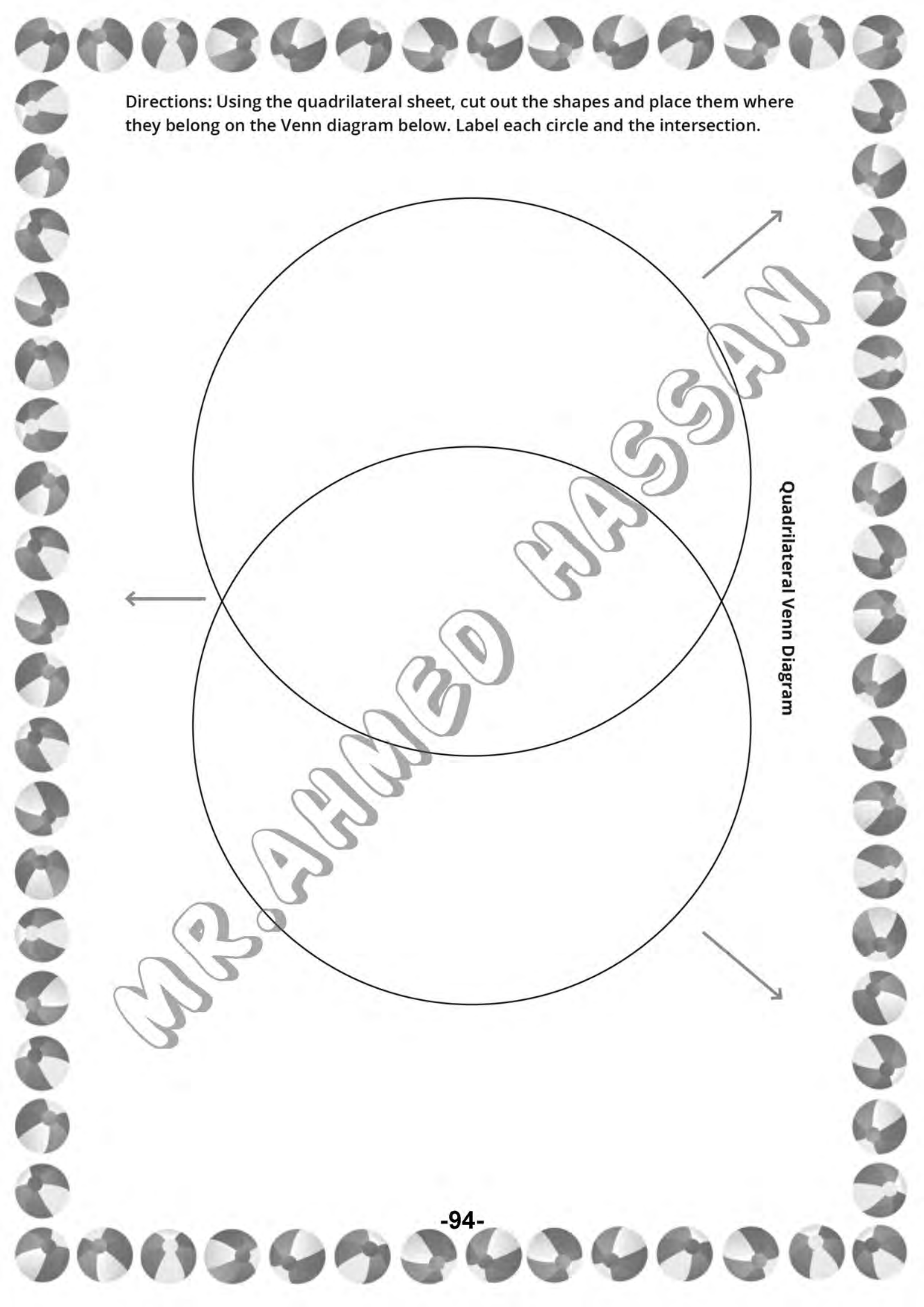
2. What quadrilateral could NOT go in the circle labeled *Polygons with All Sides Equal in Length*?

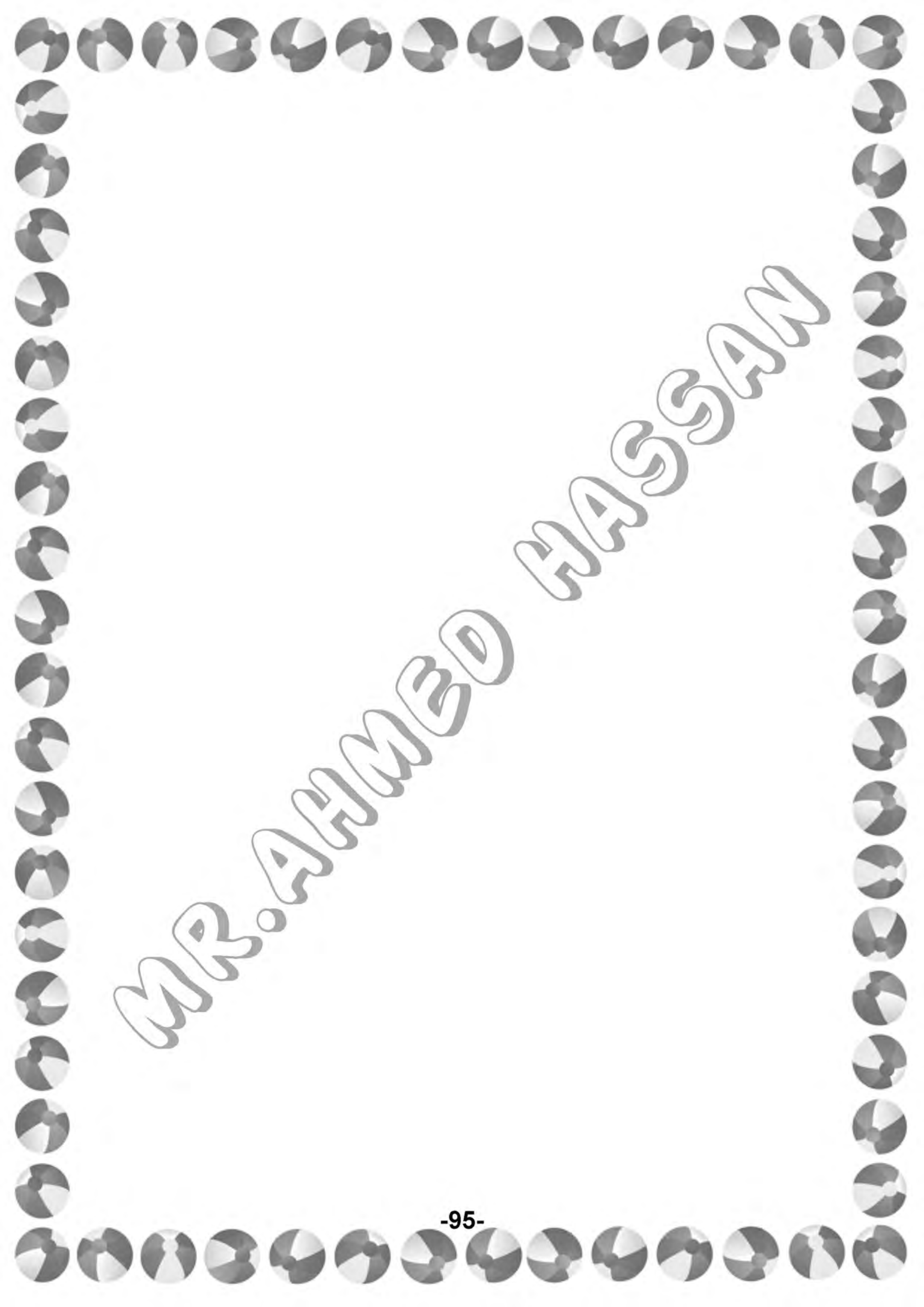
____

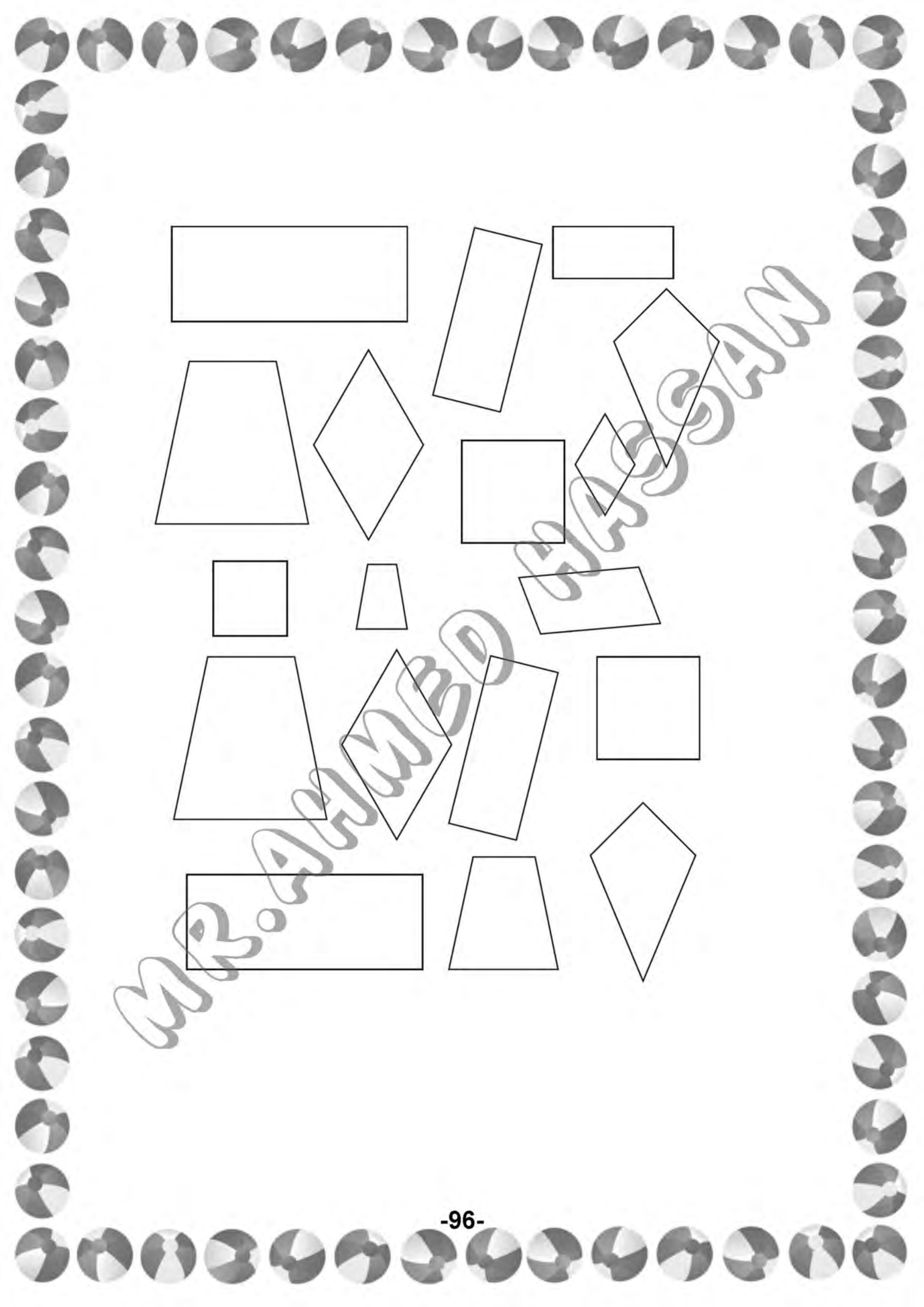
Quadrilaterals with 4 Right Angles **Polygons with All Sides Equal in Length**

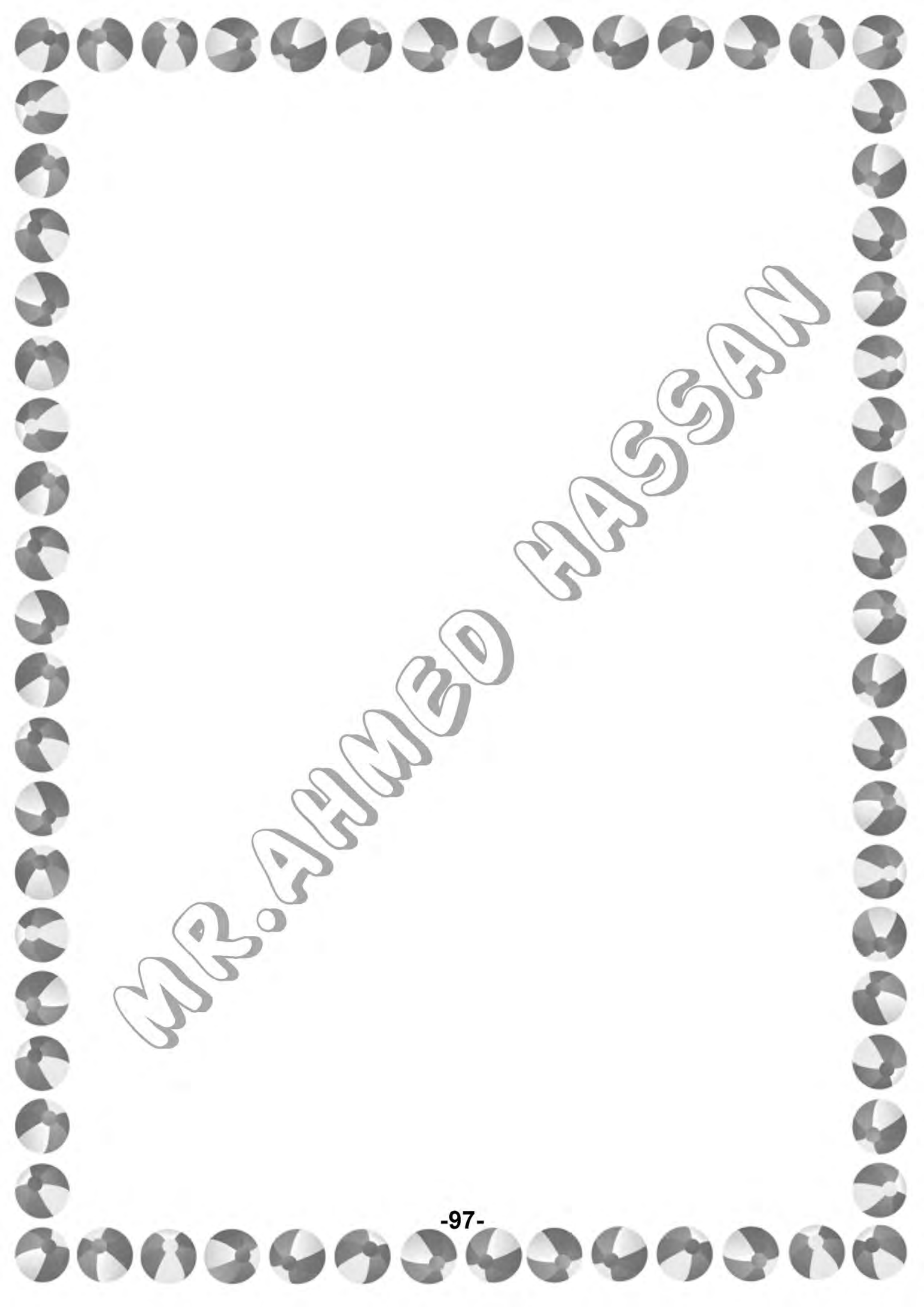


Directions: Using the quadrilateral sheet, cut out the shapes and place them where they belong on the Venn diagram below. Label each circle and the intersection.





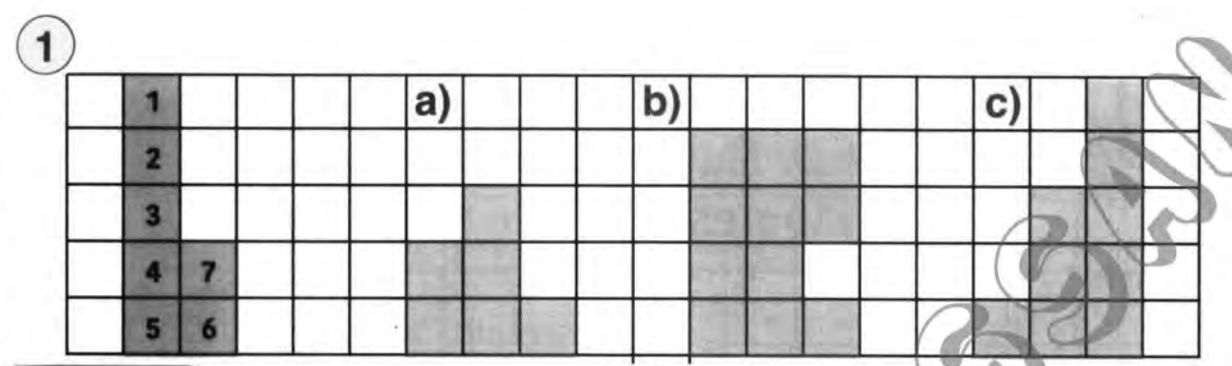




Lessons 34-37: The Area

Find the area of these gardens:

1



Example

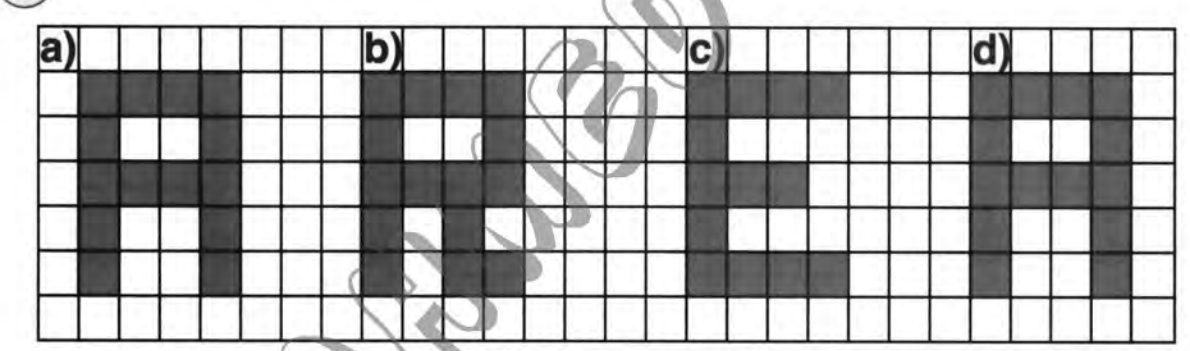
Area = 7 square units

Area = ... square units

Area = ... square units

Area = ... square units

2

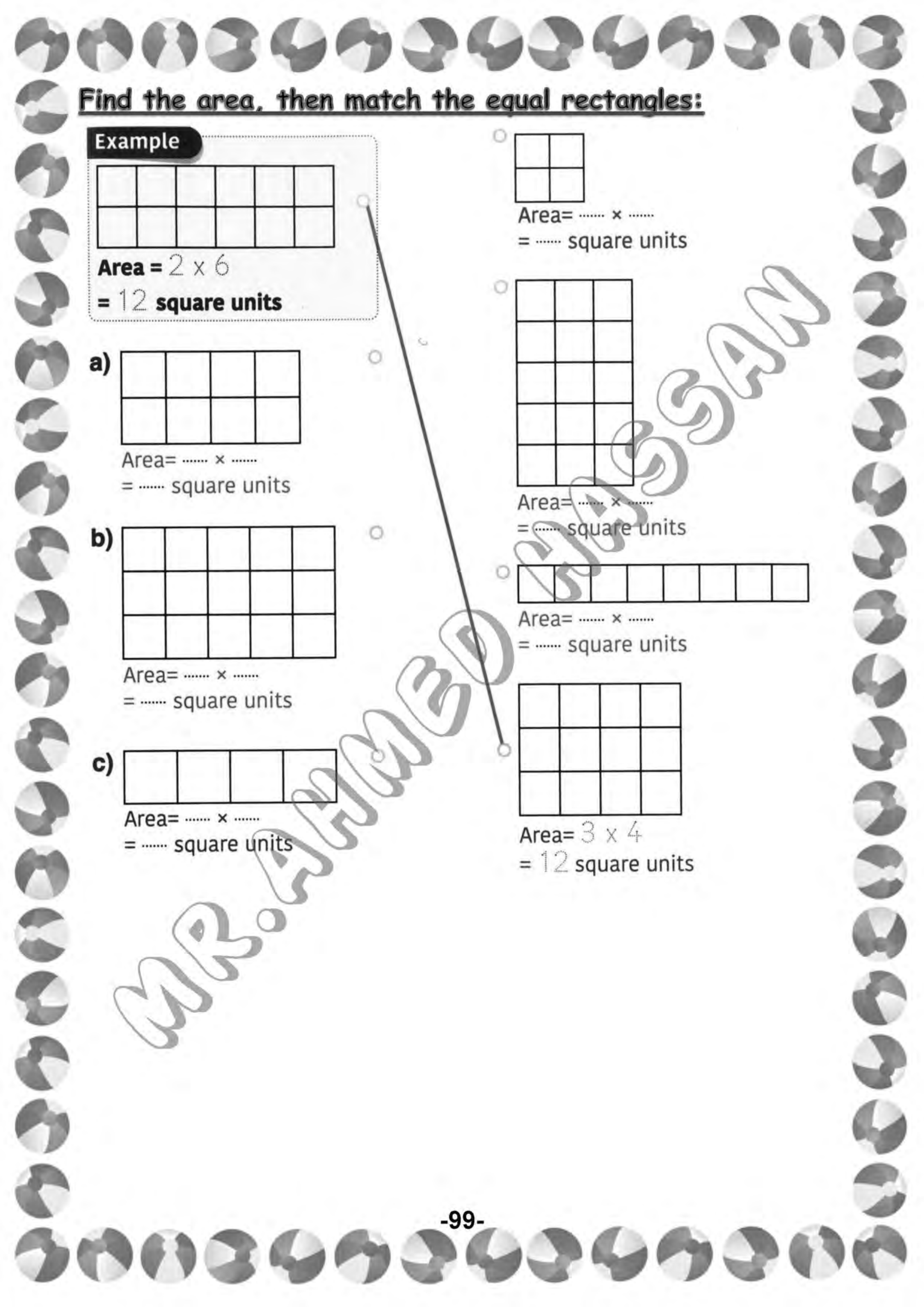


Area = ... square units

Area = ... square units

Area = ... square units

Area = ... square units



Find the area, then match the equal rectangles:

Example

Area = 2 x 6

= 12 **square units**

a) Area= .... × ....

= .... square units

b) Area= .... × ....

= .... square units

c) Area= .... × ....

= .... square units

Area= .... × ....

= .... square units

Area= .... × ....

= .... square units

Area= .... × ....

= .... square units

Area= 3 x 4

= 12 square units

Directions: Follow the steps below.

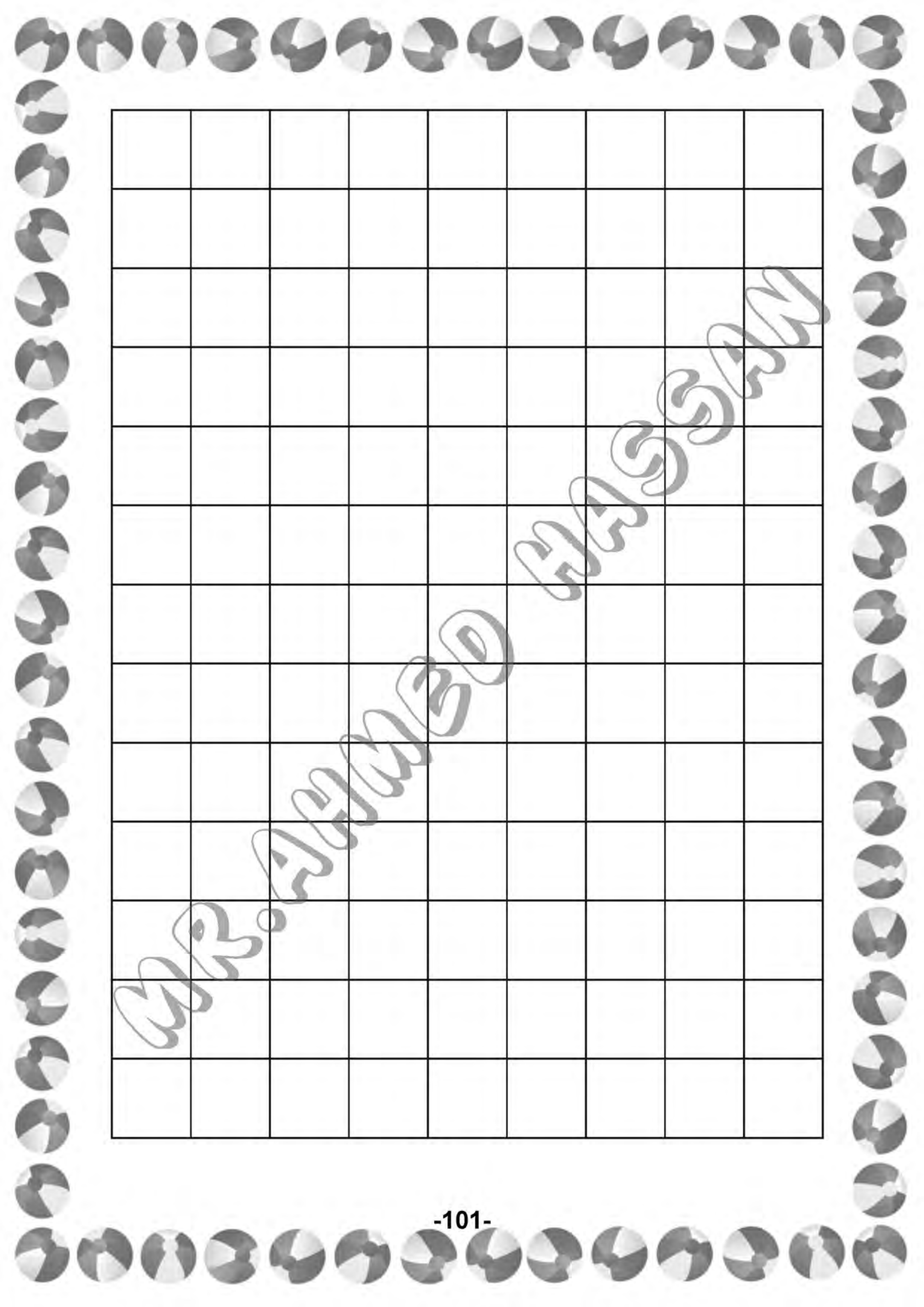
1. Read the problem and then build the garden plot using the small squares.

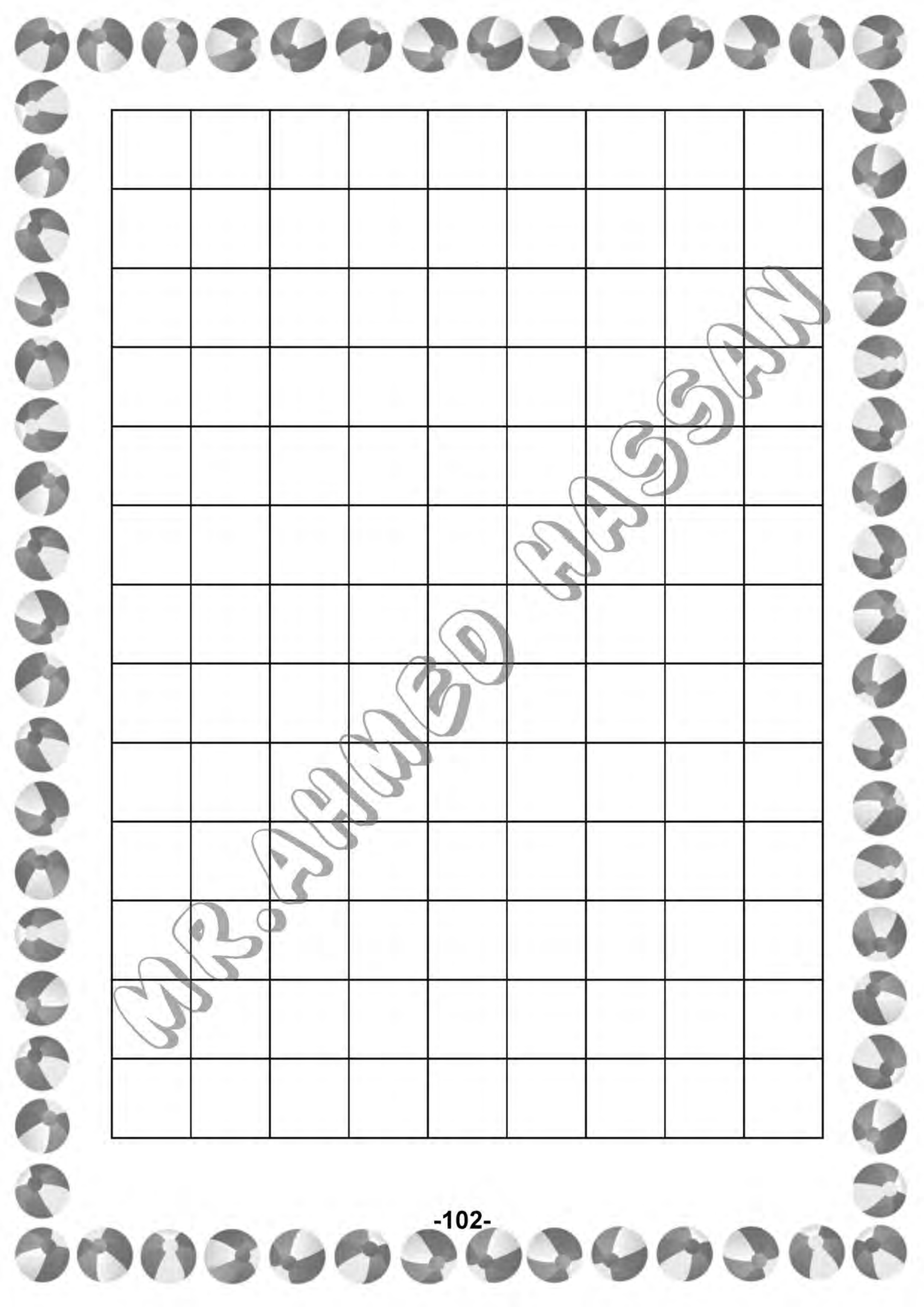
2. Draw the garden plot on the grid paper. (Hint: You can place your squares on the grid to help you draw the outlines of the garden plot.)

3. Find the total area of the garden plot (array).

4. Repeat for all garden plots.

GARDEN PLOT PROBLEMS	ANSWERS
Garden Plot #1: Jana is planting squash. Each squash needs 1 square unit of space. She would like the garden to have 2 rows with 9 square units in each row. How many squash can she fit? What is the area of her garden in square units?	
Garden Plot #2: Omar wants to plant corn. Corn needs 1 square unit of space. He would like the garden to have 3 rows with 7 square units in each row. How much corn can Omar fit in his garden? What is the area of his garden in square units?	
Garden Plot #3: Youssef loves watermelon and wants to plant it in his garden. Watermelon needs 1 square unit of space. He would like the garden to have 4 rows with 4 square units in each row. How many watermelons can Youssef fit in his garden? What is the area of his garden in square units?	
Garden Plot #4: Nadia wants to plant zucchini. Zucchini needs 1 square unit of space. She would like the garden to have 3 rows with 4 square units in each row. How much zucchini can Nadia fit in her garden? What is the area of her garden in square units?	
Garden Plot #5: Aya wants to plant lettuce. Lettuce needs 1 square unit of space. She would like the garden to have 5 rows with 8 square units in each row. How much lettuce can Aya fit in her garden? What is the area of her garden in square units?	





Use Area Models

Essential Question Why can you multiply to find the area of a rectangle?

Unlock the Problem (Real World)

Cristina has a garden that is shaped like the rectangle below. Each unit square represents 1 square meter. What is the area of her garden?

- Circle the shape of the garden.

One Way Count unit squares.

Count the number of unit squares in all.

There are _____ unit squares.

So, the area is _____ square meters.

Other Ways

A Use repeated addition.

Count the number of rows. Count the number of unit squares in each row.

_____ unit squares

_____ unit squares

_____ unit squares

_____ rows of _____ = ■

Write an addition equation.

_____ + _____ + _____ = _____

So, the area is _____ square meters.

B Use multiplication.

Count the number of rows. Count the number of unit squares in each row.

_____ unit squares in each row

_____ rows

_____ rows of _____ = ■

This rectangle is like an array. How do you find the total number of squares in an array?

____

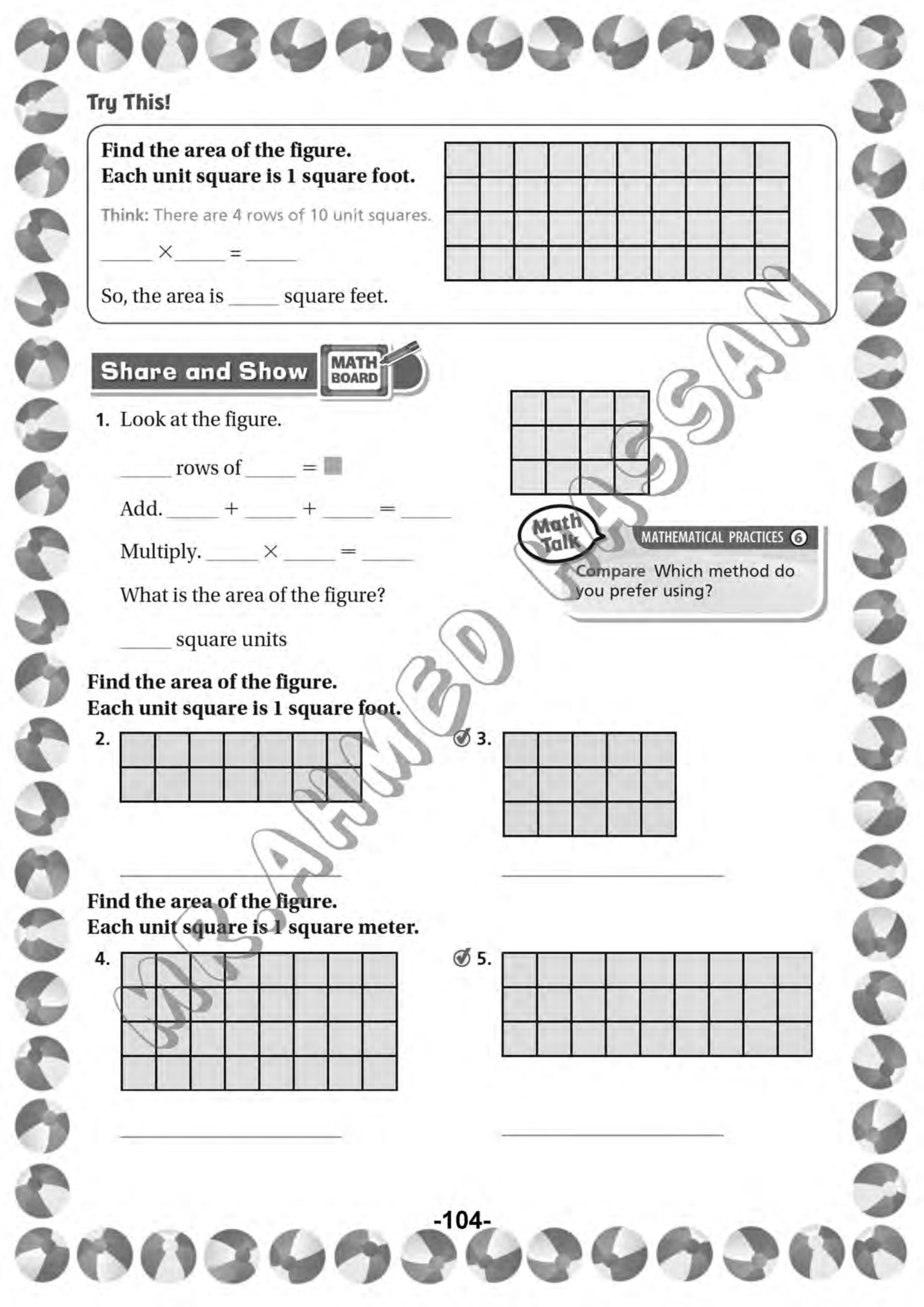
_____ × _____ = _____

Write a multiplication equation.

So, the area is _____ square meters.

Math Talk MATHEMATICAL PRACTICES 1

Analyze Can you use all 3 methods mentioned to find the area of all figure?



Try This!

Find the area of the figure.
Each unit square is 1 square foot.

Think: There are 4 rows of 10 unit squares.

_____ × _____ = _____

So, the area is _____ square feet.

Share and Show

MATH BOARD

1. Look at the figure.

   _____ rows of _____ = ■

   Add. _____ + _____ + _____ = _____

   Multiply. _____ × _____ = _____

   What is the area of the figure?

   _____ square units

Math Talk

MATHEMATICAL PRACTICES 6

Compare Which method do you prefer using?

Find the area of the figure.
Each unit square is 1 square foot.

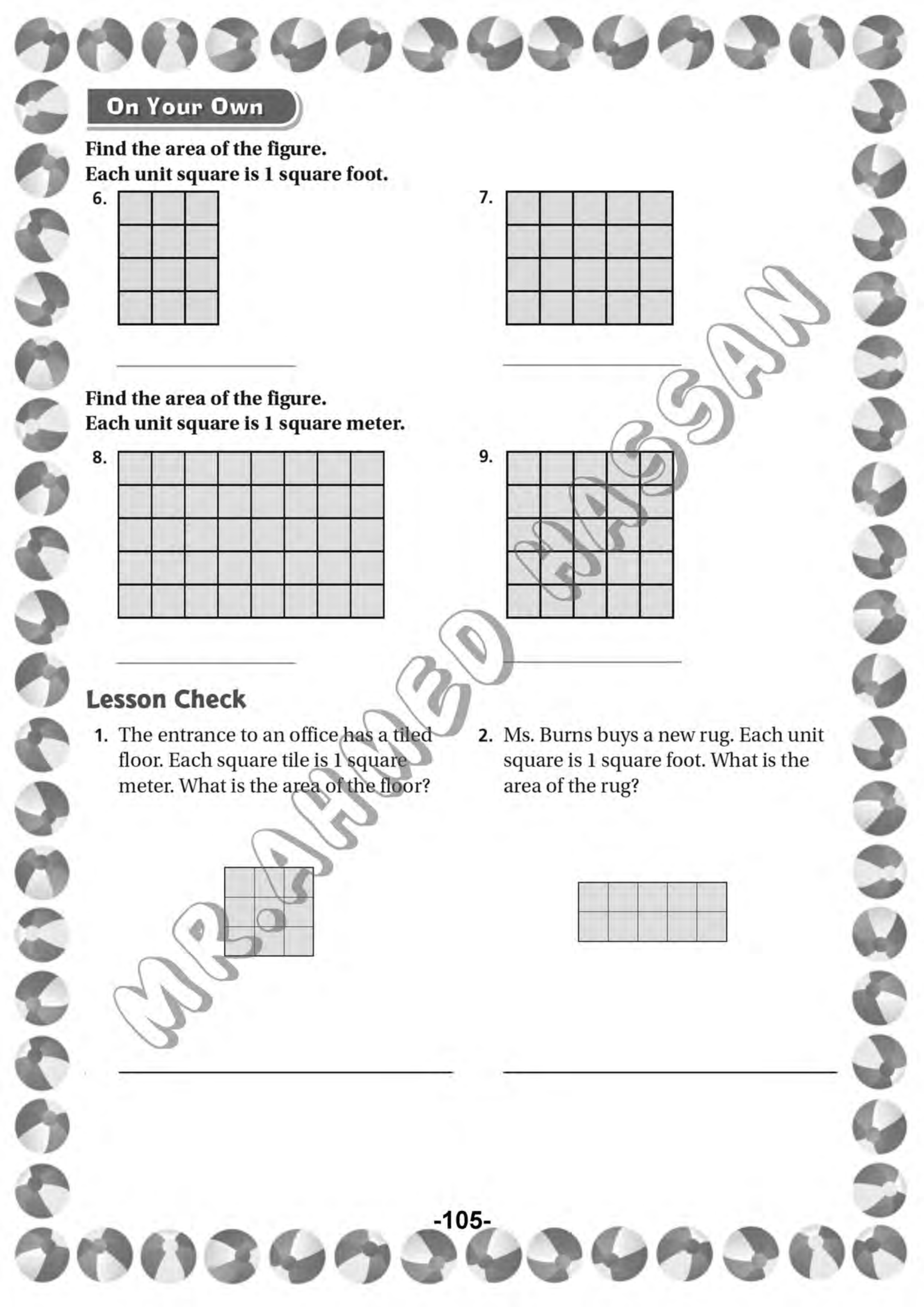
2. _____________________

3. _____________________

Find the area of the figure.
Each unit square is 1 square meter.

4. _____________________

5. _____________________



On Your Own

Find the area of the figure.
Each unit square is 1 square foot.

6.

7.

Find the area of the figure.
Each unit square is 1 square meter.

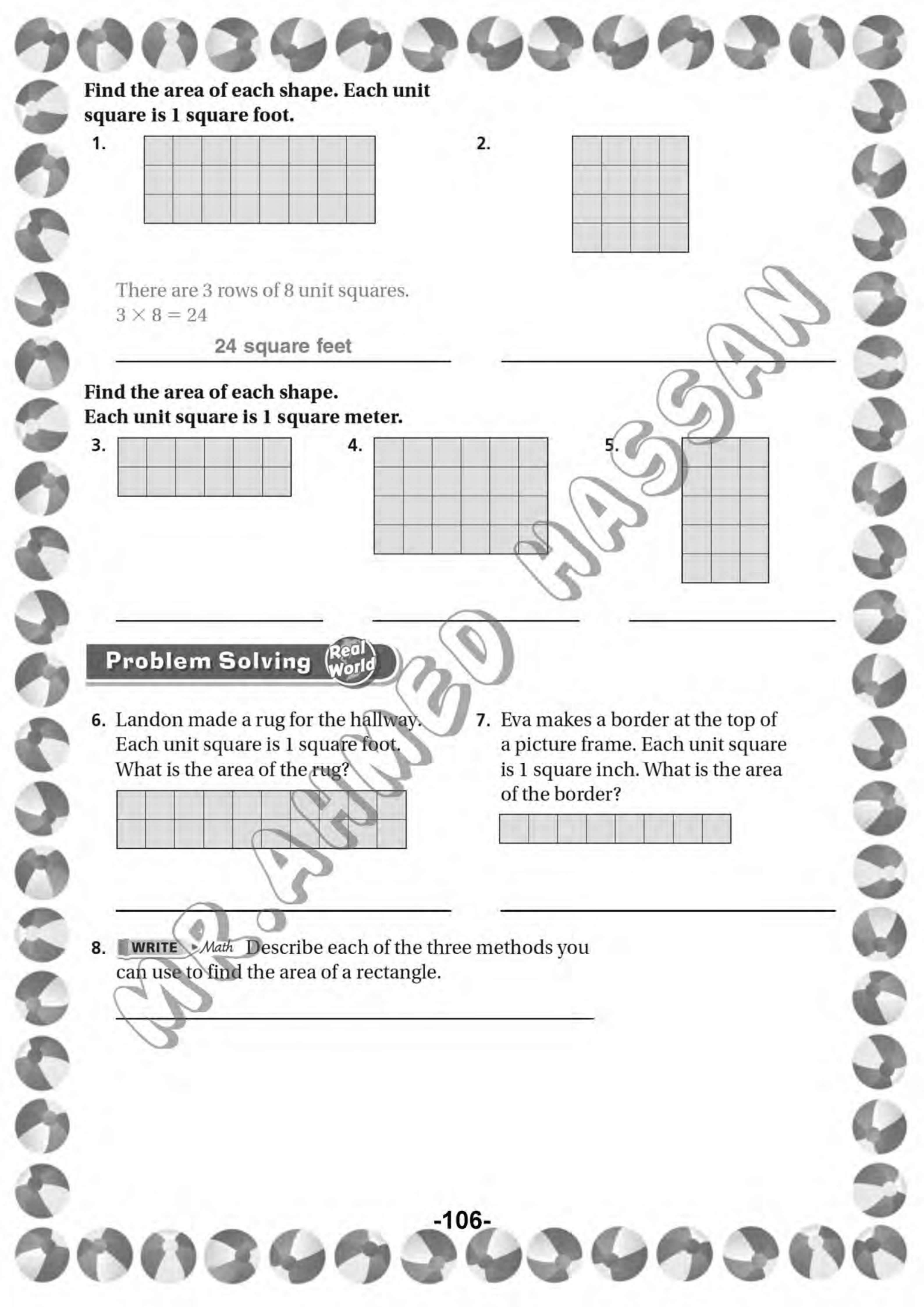
8.

9.

Lesson Check

1. The entrance to an office has a tiled floor. Each square tile is 1 square meter. What is the area of the floor?

2. Ms. Burns buys a new rug. Each unit square is 1 square foot. What is the area of the rug?



Find the area of each shape. Each unit square is 1 square foot.

1.

There are 3 rows of 8 unit squares.
$3 \times 8 = 24$

24 square feet

2.

Find the area of each shape.
Each unit square is 1 square meter.

3.

4.

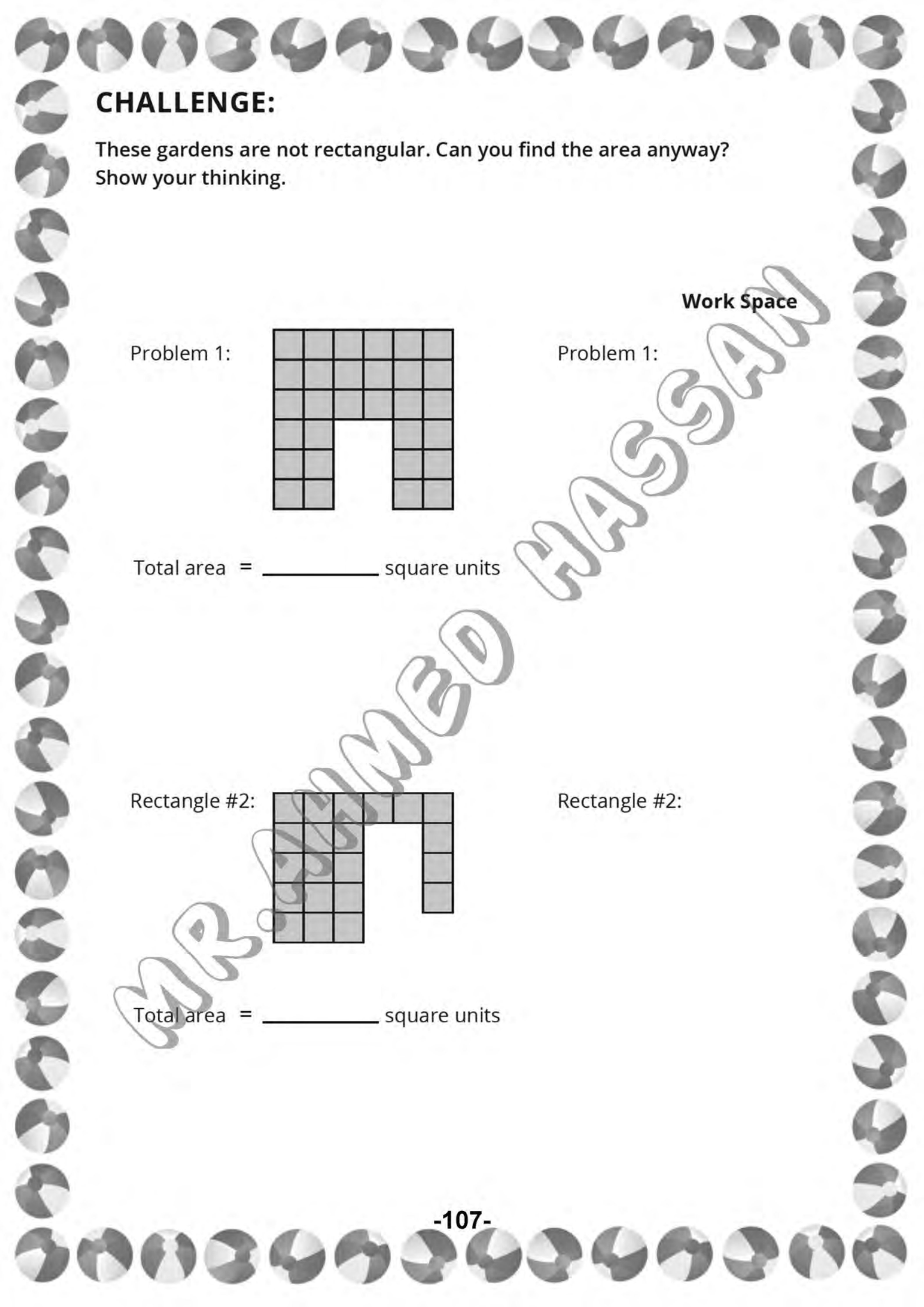
5.

Problem Solving Real World

6. Landon made a rug for the hallway. Each unit square is 1 square foot. What is the area of the rug?

7. Eva makes a border at the top of a picture frame. Each unit square is 1 square inch. What is the area of the border?

8. WRITE *Math* Describe each of the three methods you can use to find the area of a rectangle.



CHALLENGE:

These gardens are not rectangular. Can you find the area anyway? Show your thinking.

Work Space

Problem 1:

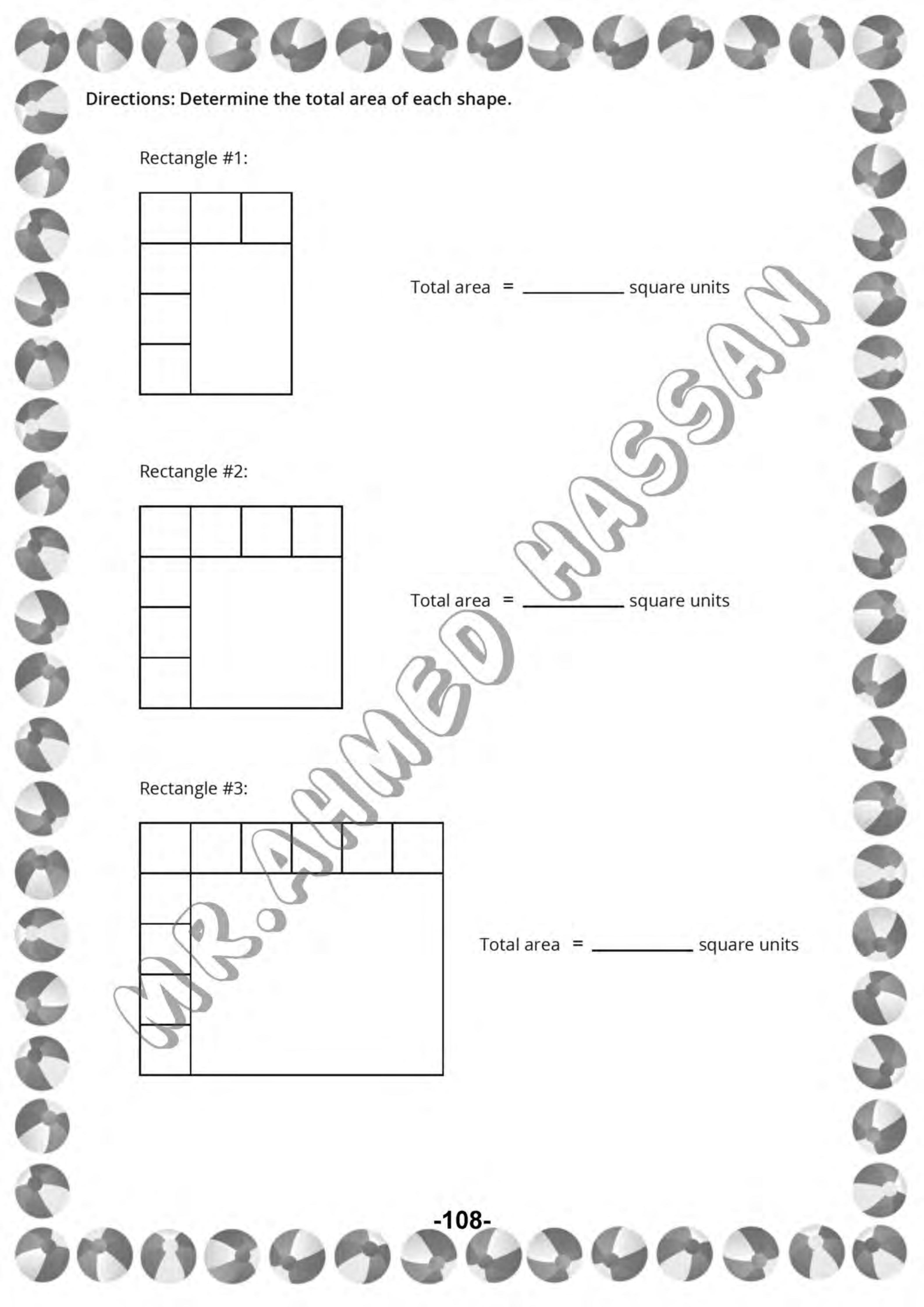
Problem 1:

Total area = ____________ square units

Rectangle #2:

Rectangle #2:

Total area = ____________ square units



Directions: Determine the total area of each shape.

Rectangle #1:

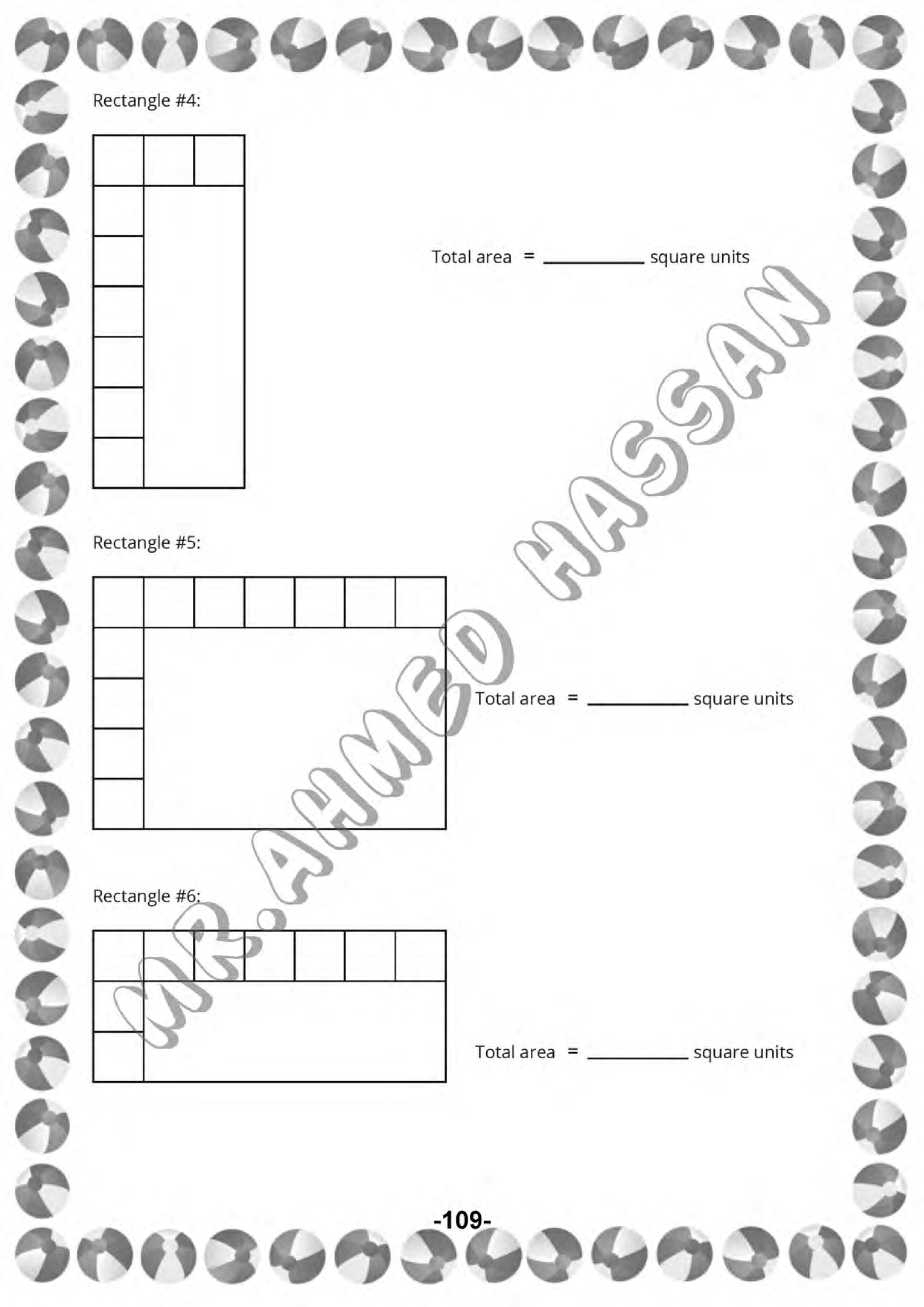
Total area = __________ square units

Rectangle #2:

Total area = __________ square units

Rectangle #3:

Total area = __________ square units



Rectangle #4:

Total area = __________ square units

Rectangle #5:

Total area = __________ square units

Rectangle #6:

Total area = __________ square units

Lessons 38-40: Distributive property of multiplication

Write the multiplication equations after splitting each array into 2 arrays:

a)

(4 × 6) = ... square units

(...... × ......) + (...... × ......)

(......) + (......)= ...... square units

b)

(5 × 4) = ... square units

(...... × ......) + (...... × ......)

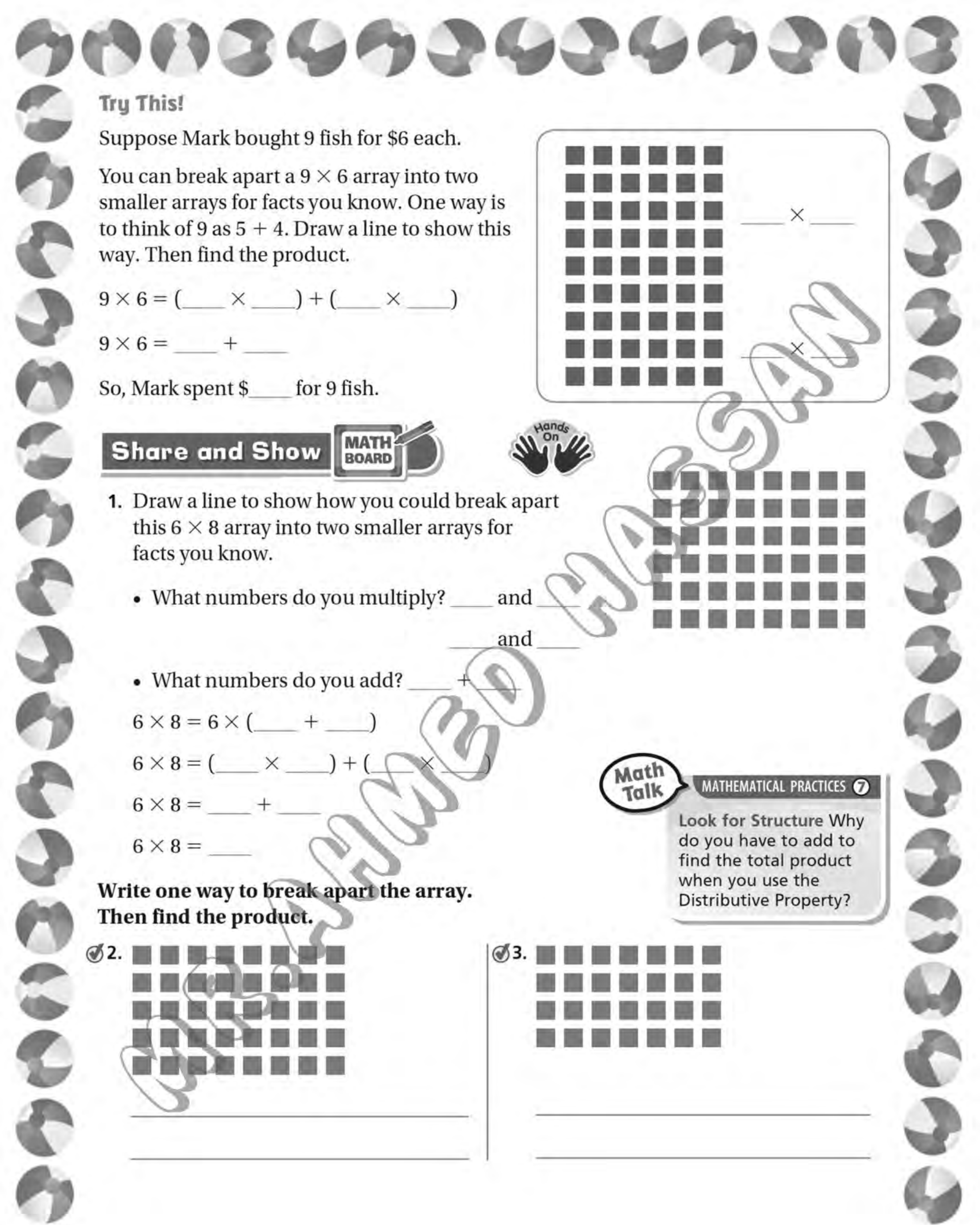
(......) + (......)= ...... square units

c)

(3 × 8) = ... square units

(...... × ......) + (...... × ......)

(......) + (......)= ...... square units



Try This!

Suppose Mark bought 9 fish for \$6 each.

You can break apart a 9×6 array into two smaller arrays for facts you know. One way is to think of 9 as $5 + 4$. Draw a line to show this way. Then find the product.

$___ \times ___$

$___ \times ___$

$9 \times 6 = (___ \times ___) + (___ \times ___)$

$9 \times 6 = ___ + ___$

So, Mark spent \$____ for 9 fish.

Share and Show MATH BOARD

Hands On

1. Draw a line to show how you could break apart this 6×8 array into two smaller arrays for facts you know.

   - What numbers do you multiply? ____ and ____

     ____ and ____

   - What numbers do you add? ____ + ____

   $6 \times 8 = 6 \times (___ + ___)$

   $6 \times 8 = (___ \times ___) + (___ \times ___)$

   $6 \times 8 = ___ + ___$

   $6 \times 8 = ___$

Math Talk MATHEMATICAL PRACTICES 7

Look for Structure Why do you have to add to find the total product when you use the Distributive Property?

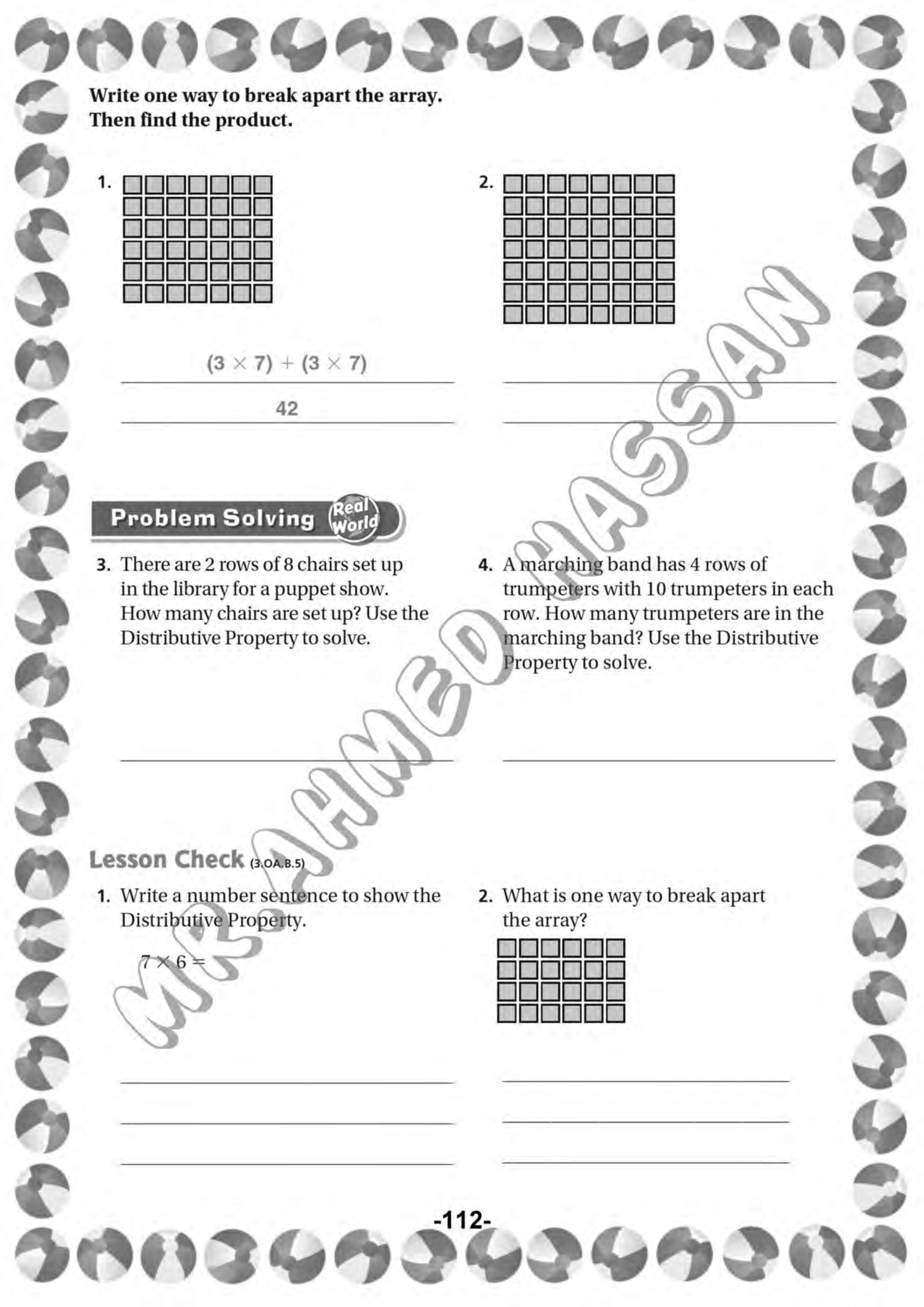
Write one way to break apart the array. Then find the product.

2. ______________________

   ____

3. ______________________

   ____



Write one way to break apart the array. Then find the product.

1\.

$(3 \times 7) + (3 \times 7)$

42

2\.

Problem Solving Real World

3\. There are 2 rows of 8 chairs set up in the library for a puppet show. How many chairs are set up? Use the Distributive Property to solve.

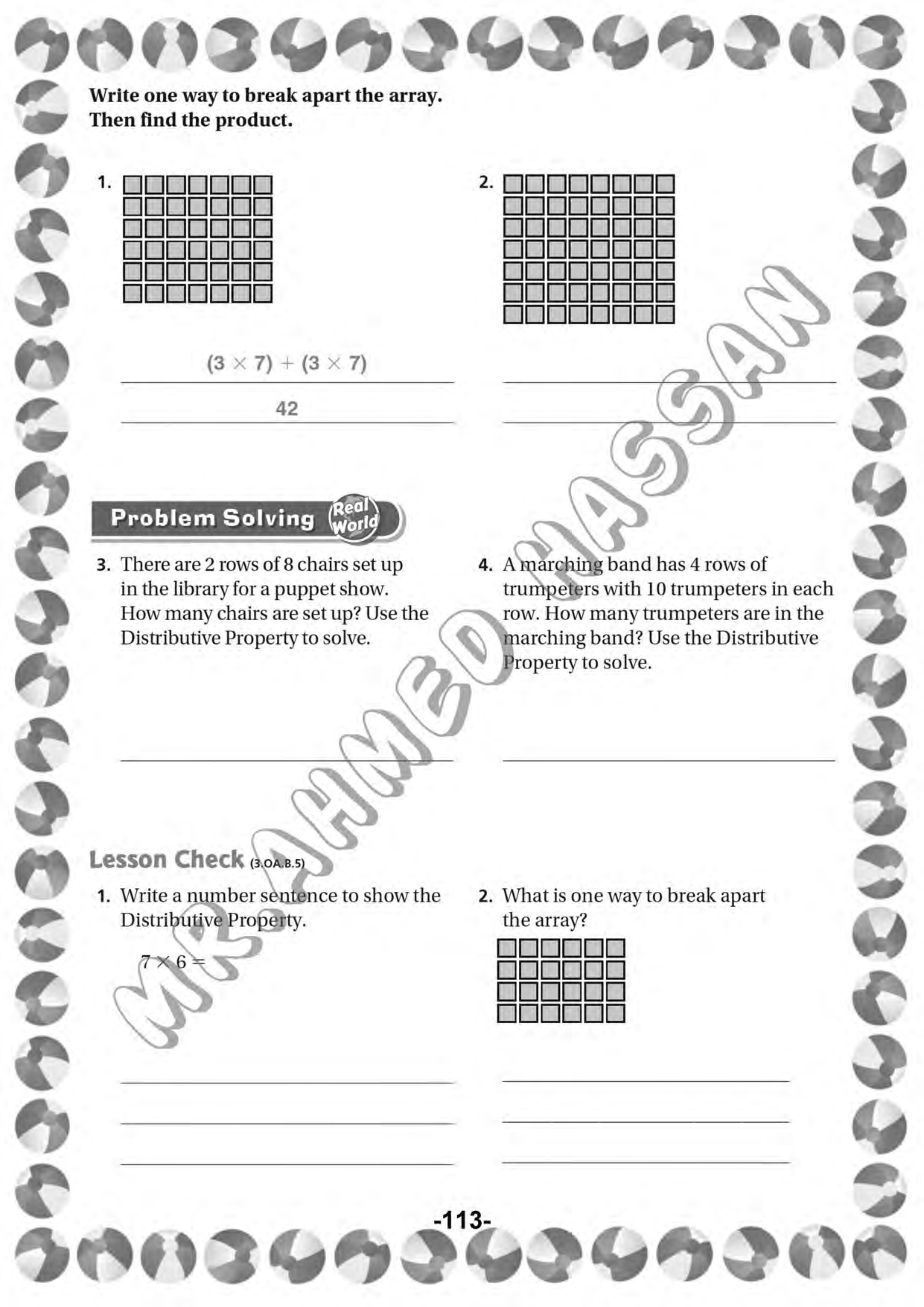
4\. A marching band has 4 rows of trumpeters with 10 trumpeters in each row. How many trumpeters are in the marching band? Use the Distributive Property to solve.

Lesson Check (3.OA.B.5)

1\. Write a number sentence to show the Distributive Property.

$7 \times 6 =$

2\. What is one way to break apart the array?



Write one way to break apart the array. Then find the product.

1.

$(3 \times 7) + (3 \times 7)$

42

2.

Problem Solving (Real World)

3. There are 2 rows of 8 chairs set up in the library for a puppet show. How many chairs are set up? Use the Distributive Property to solve.

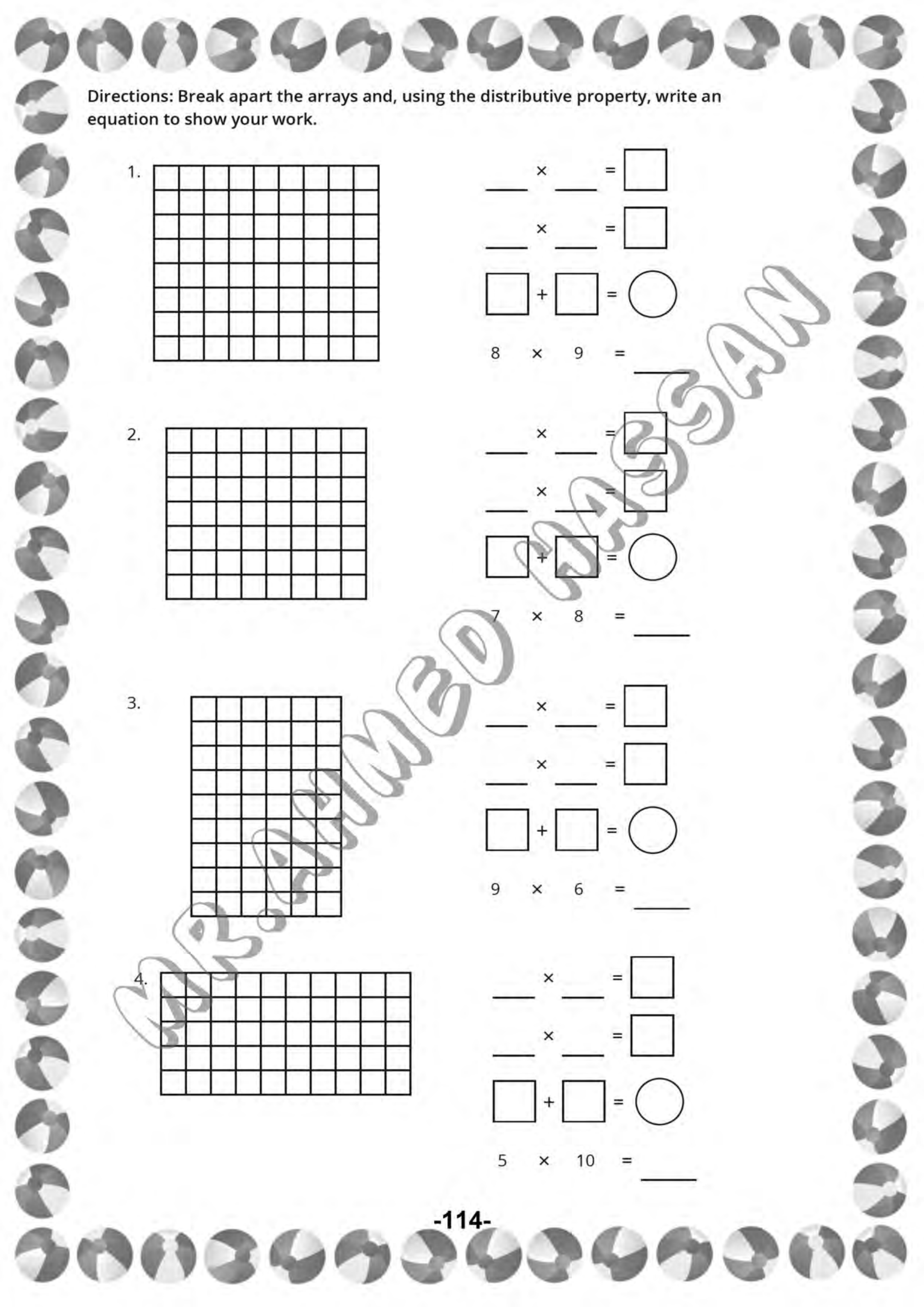
4. A marching band has 4 rows of trumpeters with 10 trumpeters in each row. How many trumpeters are in the marching band? Use the Distributive Property to solve.

Lesson Check (3.OA.B.5)

1. Write a number sentence to show the Distributive Property.

$7 \times 6 =$

2. What is one way to break apart the array?



Directions: Break apart the arrays and, using the distributive property, write an equation to show your work.

1.

___ × ___ = ☐

___ × ___ = ☐

☐ + ☐ = ◯

8 × 9 = ____

2.

___ × ___ = ☐

___ × ___ = ☐

☐ + ☐ = ◯

7 × 8 = ____

3.

___ × ___ = ☐

___ × ___ = ☐

☐ + ☐ = ◯

9 × 6 = ____

4.

___ × ___ = ☐

___ × ___ = ☐

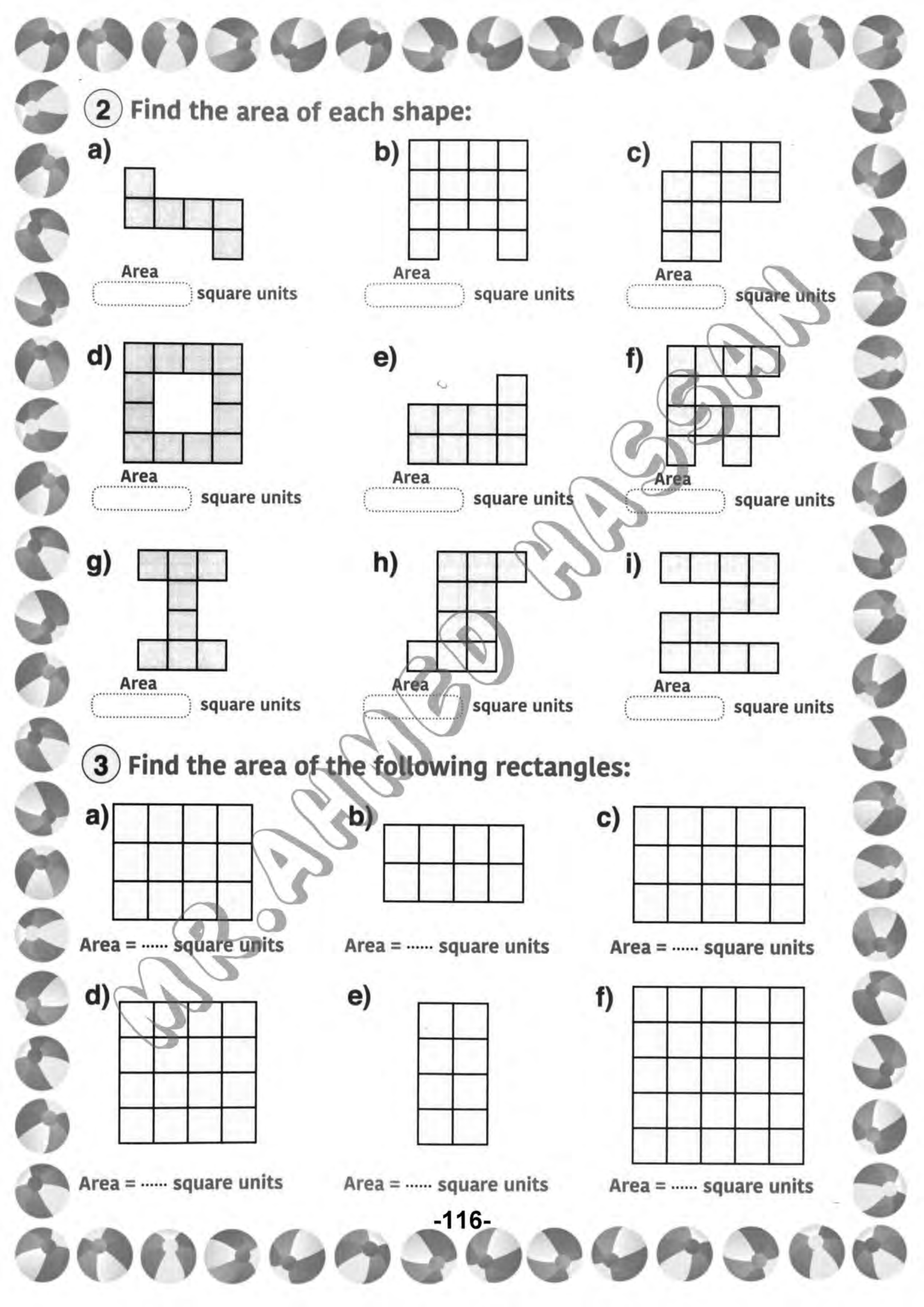
☐ + ☐ = ◯

5 × 10 = ____

Exercises on chapter4

1 Fill in the following table:

Shape	Name	Sides	Vertices	quadrilaterals
	Triangle	3	3	No
a)	....	....	....	....
b)	....	....	....	....
c)	....	....	....	....
d)	....	....	....	....
e)	....	....	....	....



② Find the area of each shape:

a) Area ☐ square units

b) Area ☐ square units

c) Area ☐ square units

d) Area ☐ square units

e) Area ☐ square units

f) Area ☐ square units

g) Area ☐ square units

h) Area ☐ square units

i) Area ☐ square units

③ Find the area of the following rectangles:

a) Area = ... square units

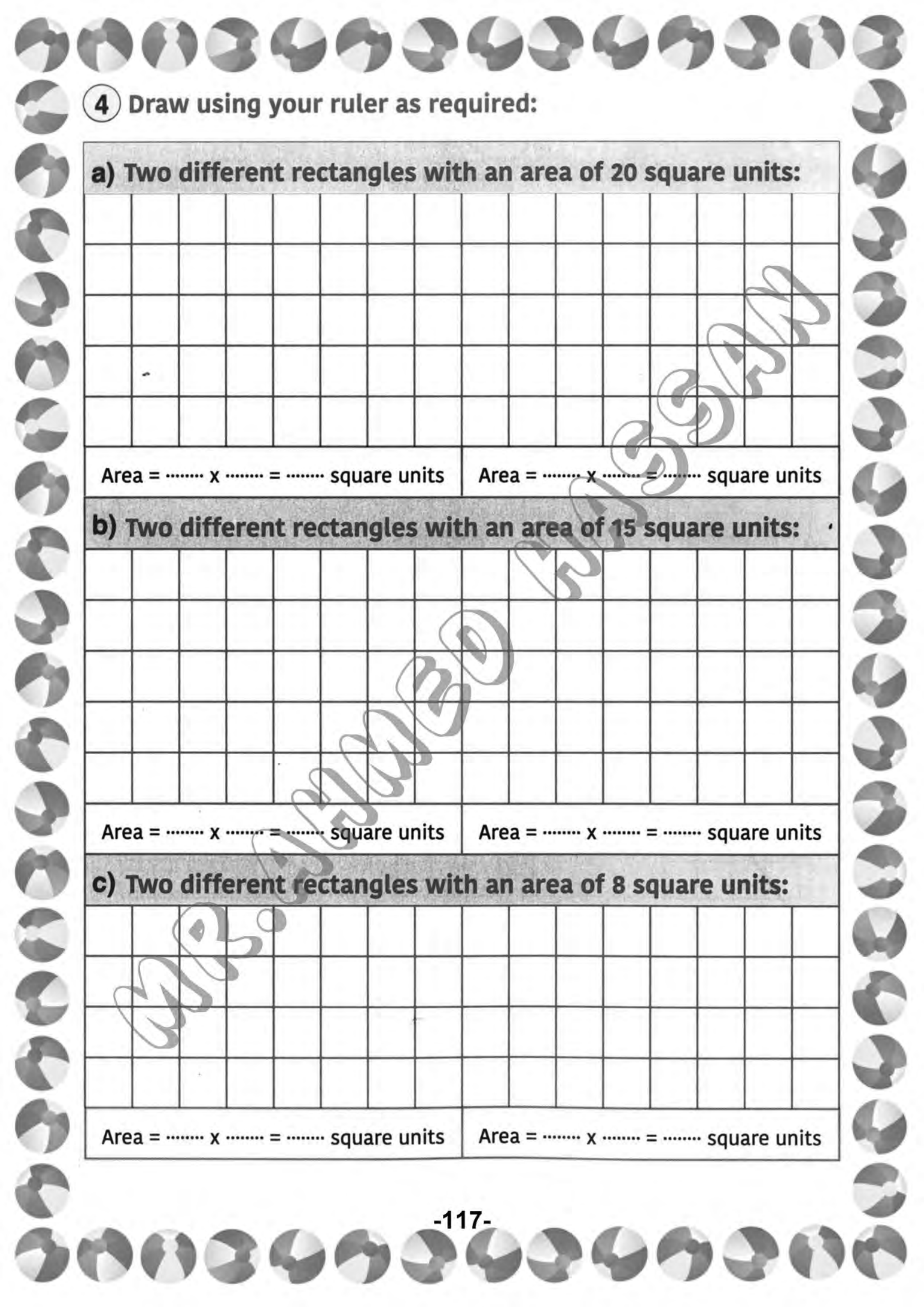
b) Area = ... square units

c) Area = ... square units

d) Area = ... square units

e) Area = ... square units

f) Area = ... square units



4 Draw using your ruler as required:

a) Two different rectangles with an area of 20 square units:

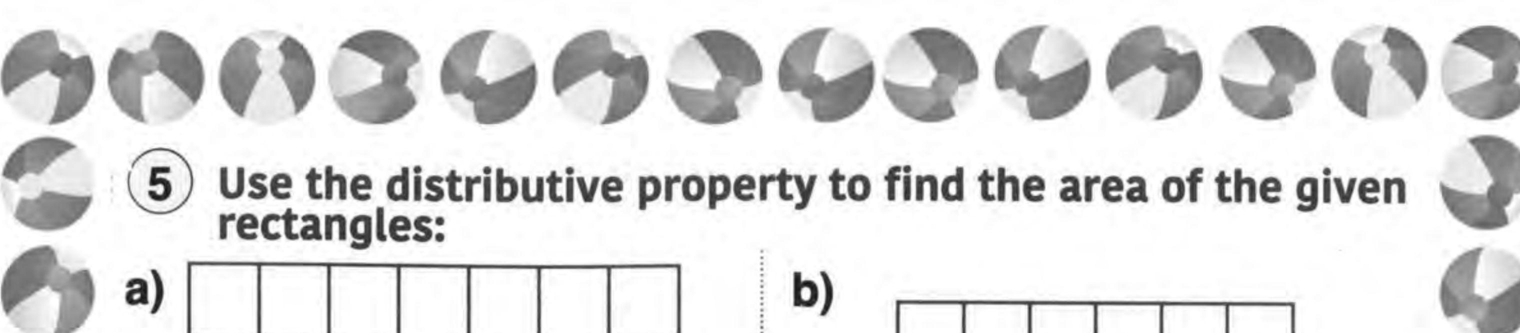
Area = ... x .... = ... square units	Area = ... x .... = ... square units

b) Two different rectangles with an area of 15 square units:

Area = ... x .... = ... square units	Area = ... x .... = ... square units

c) Two different rectangles with an area of 8 square units:

Area = ... x .... = ... square units	Area = ... x .... = ... square units



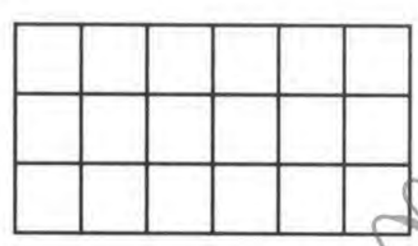
⑤ Use the distributive property to find the area of the given rectangles:

a)

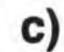


- (...... × ......) + (...... × ......)
- (......) + (......) = ... square units

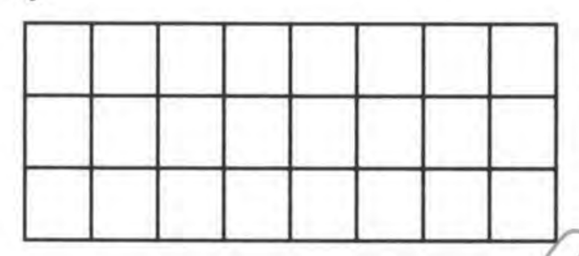
b)



- (...... × ......) + (...... × ......)
- (......) + (......) = ... square units

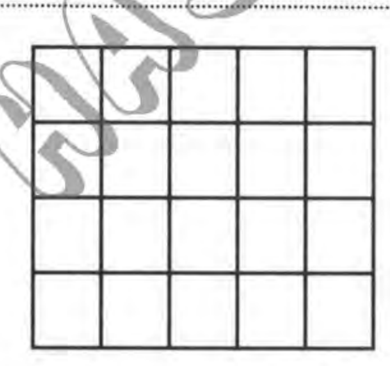


c)



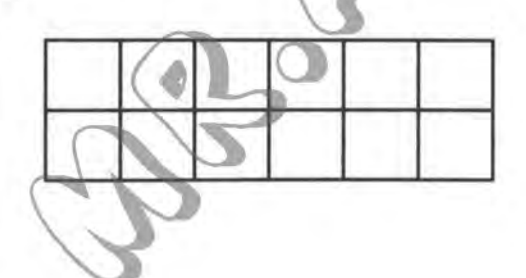
- (...... × ......) + (...... × ......)
- (......) + (......) = ... square units

d)



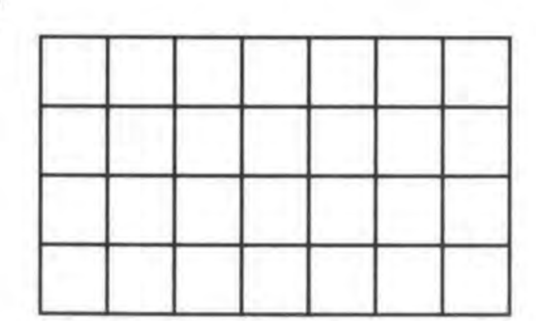
- (...... × ......) + (...... × ......)
- (......) + (......) = ... square units

e)

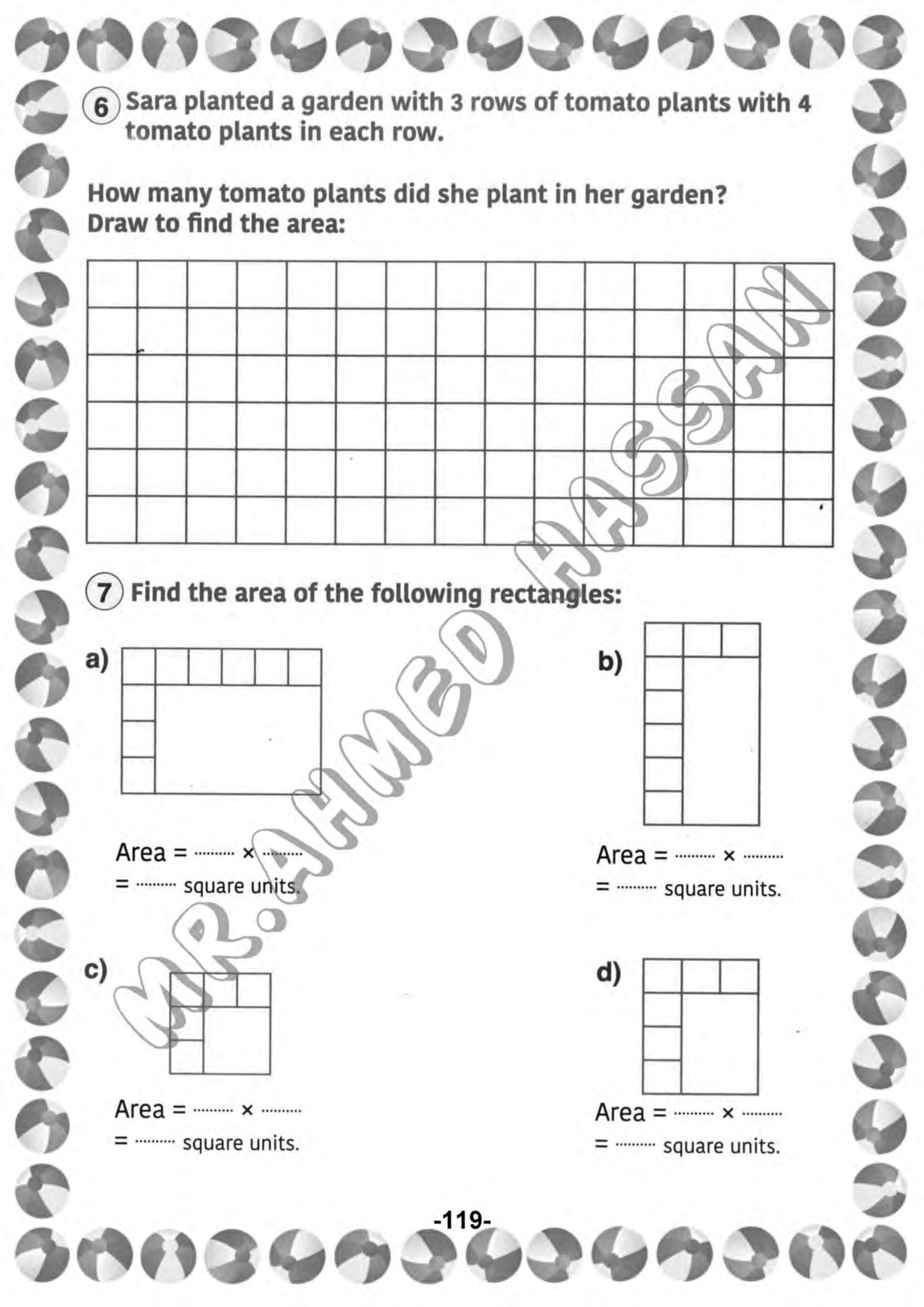


- (...... × ......) + (...... × ......)
- (......) + (......) = ... square units

f)



- (...... × ......) + (...... × ......)
- (......) + (......) = ... square units



6) Sara planted a garden with 3 rows of tomato plants with 4 tomato plants in each row.

How many tomato plants did she plant in her garden?
Draw to find the area:

7) Find the area of the following rectangles:

a)

Area = ... × ....
= .... square units.

b)

Area = ... × ....
= .... square units.

c)

Area = ... × ....
= .... square units.

d)

Area = ... × ....
= .... square units.

Additional Exercises

1 Complete:

1) The area of an array with the two dimensions 6 and 7 is .... Square units.
2) The 2D shape with no vertices or sides is ....
3) The number of square units that this shape consists of is ....
4) The shape ______ is not a .... because it doesn't consist of line segments.
5) The area of the garden is .... square units.
6) A parallelogram is............... dimensional shape. It has .... pairs of parallel sides.
7) The number of ▲ in the figure = ... ▲.

2 Choose the correct answer:

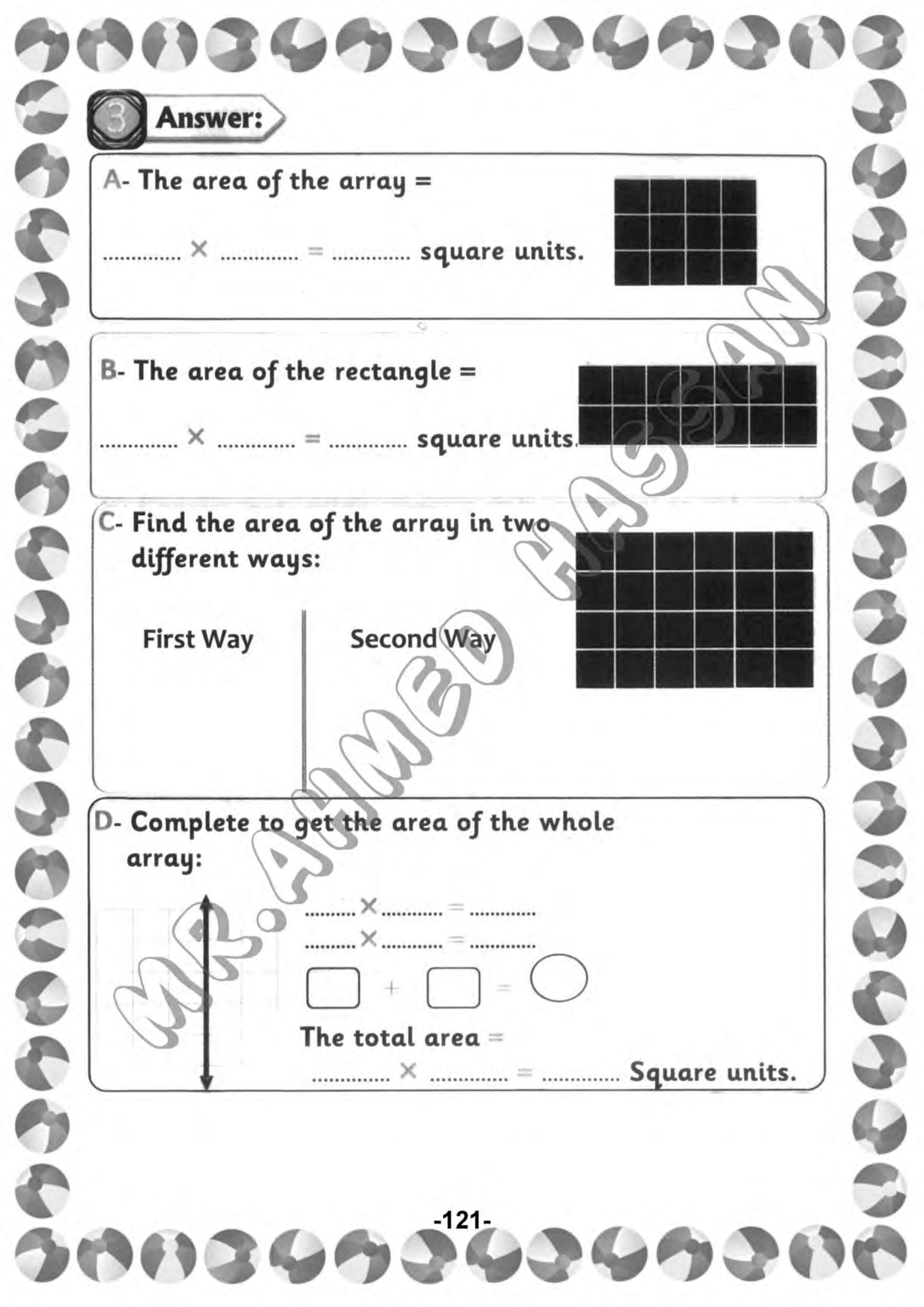
1- A (cylinder - cube - triangle) is a 2D shape.

2- All of these shapes are polygons except (- ■ - ∞).

3- A 2D shape with 6 vertices is (pentagon - hexagon - quadrilateral).

4- The two dimensions of an array with an area equal to 18 are (3,5 - 3,9 - 3,6).

5- The area of a rectangle = (15 - 9 - 10) square units.



3 Answer:

A- The area of the array =

.... × .... = ... square units.

B- The area of the rectangle =

.... × .... = ... square units.

C- Find the area of the array in two different ways:

First Way | Second Way

D- Complete to get the area of the whole array:

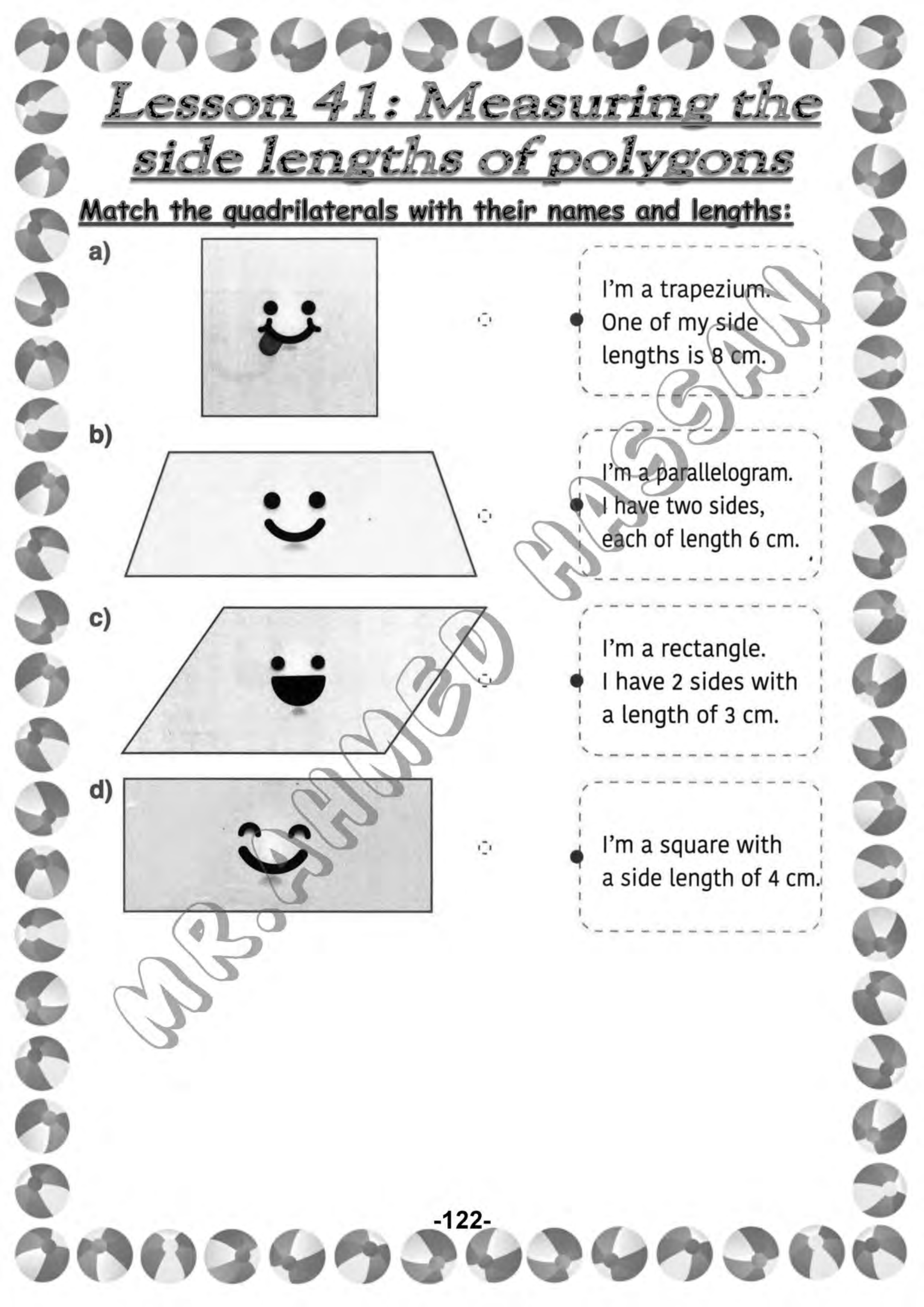
.... × .... = ...

.... × .... = ...

☐ + ☐ = ◯

The total area =

.... × .... = ... Square units.



Lesson 41: Measuring the side lengths of polygons

Match the quadrilaterals with their names and lengths:

a)

I'm a trapezium. One of my side lengths is 8 cm.

b)

I'm a parallelogram. I have two sides, each of length 6 cm.

c)

I'm a rectangle. I have 2 sides with a length of 3 cm.

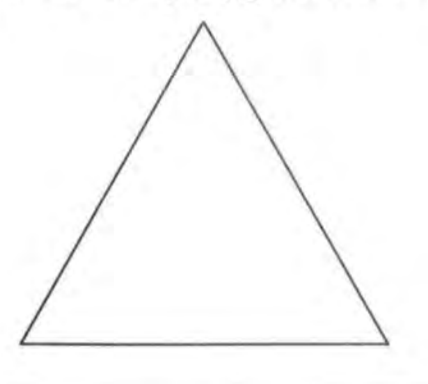
d)

I'm a square with a side length of 4 cm.

Lessons 42-43:
The perimeter of polygons

Color as required each time:

a) Color the polygon with the greater perimeter in yellow:





Perimeter =.......................= ..... cm

Perimeter =.......................= ..... cm

b) Color the polygon with the smaller perimeter in red:



Perimeter =.......................= ..... cm

Perimeter =.......................= ..... cm

c) Color the polygons with equal perimeters in purple:



Perimeter = ... = ... cm

Perimeter = ... = ... cm

Perimeter = ... = ... cm

Perimeter = ... = ... cm

Choose the correct answer:

1) The perimeter of [shape] can be measured using ....

(ruler - string – measuring tape)

2) The suitable tool to measure the perimeter of [shape] is ......

(ruler - string – measuring tape)

3) To measure the perimeter of [shape] ,we use ....

(ruler - string – measuring tape)

4) To measure the lengths of the fence surrounding a garden, we use .... (ruler - string – measuring tape)

5) All these shapes are polygons except ....

([shape] - [shape] - [shape])

6) To measure the perimeter of [shape] ,we use ....

(ruler - string – measuring tape)

7) The perimeter of the figure = ... units.

2, 2, 2, 2, 2, 2

(8 - 10 - 12)

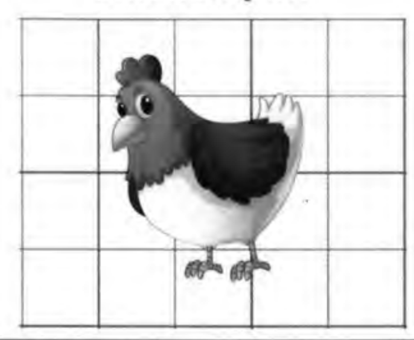
8) The length of the third side [8 cm, 6cm] = (6 - 9 - 10) cm.

when the perimeter = 24 cm

Lesson 44-46:
Area and perimeter

Find the perimeter and area of each pen in a big farm:

a) **Chicken pen**



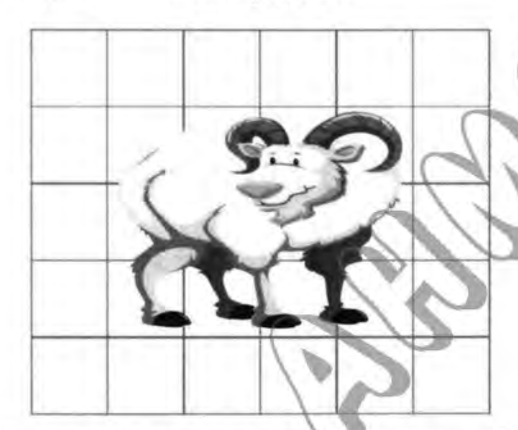
Perimeter = ... meters.
Area = ... square meters.

b) **Duck pen**



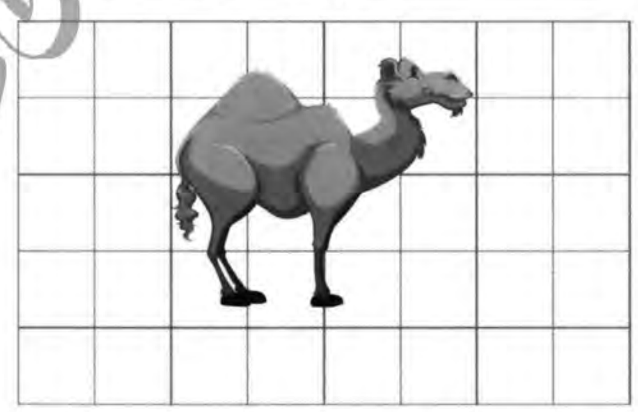
Perimeter = ... meters.
Area = ... square meters.

c) **Sheep pen**



Perimeter = ... meters.
Area = ... square meters.

d) **Camel pen**



Perimeter = ... meters.
Area = ... square meters.

Show 2 ways to find the area of the following rectangles after measuring the length:

Example

5 m

4 m

Way 1:

Area = 4 × 5 = 20 square meters

Way 2:

Area = 5 + 5 + 5 + 5 = 20 square meters

a)

Way 1:

Area = ...

Way 2:

Area = ...

.... cm

.... cm

b)

...... m

...... m

Way 1:

Area = ...

Way 2:

Area = ...

Lessons 47-49: Rectangle

Draw using your ruler as required each time:

a) Draw two different rectangles with an area of 12 square units:

First rectangle	Second rectangle
Perimeter = ... cm Area = ... cm^2	Perimeter = ... cm Area = ... cm^2

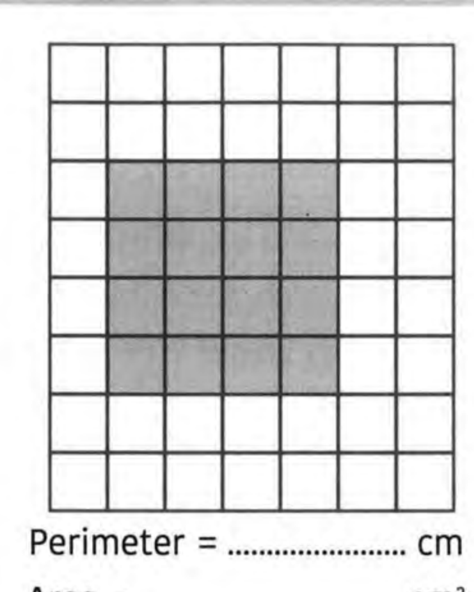
b) Draw two different rectangles with an area of 16 square units:

First rectangle	Second rectangle
Perimeter = ... cm Area = ... cm^2	Perimeter = ... cm Area = ... cm^2



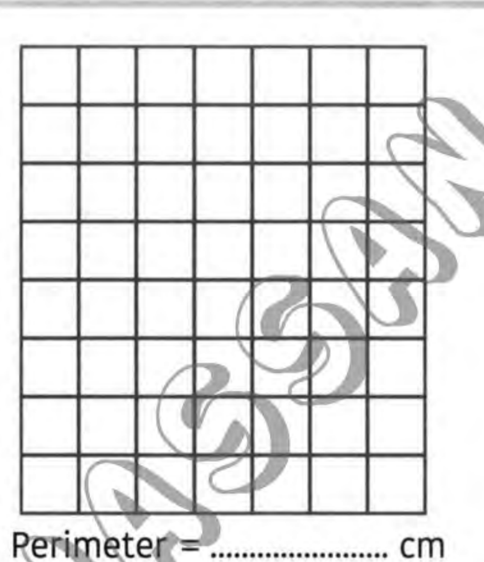
Draw using your ruler as required:

a) Draw another rectangle with the same area but different perimeter:



Perimeter = ... cm

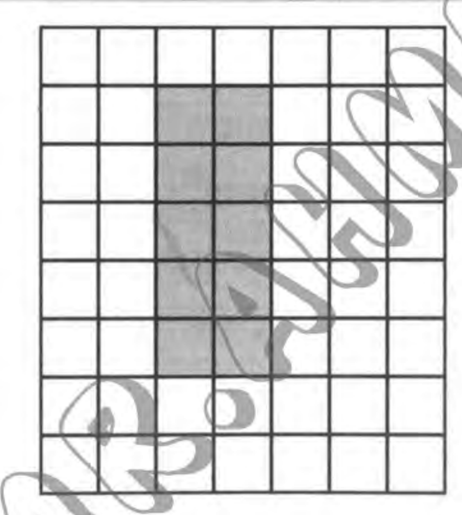
Area = ... cm²



Perimeter = ... cm

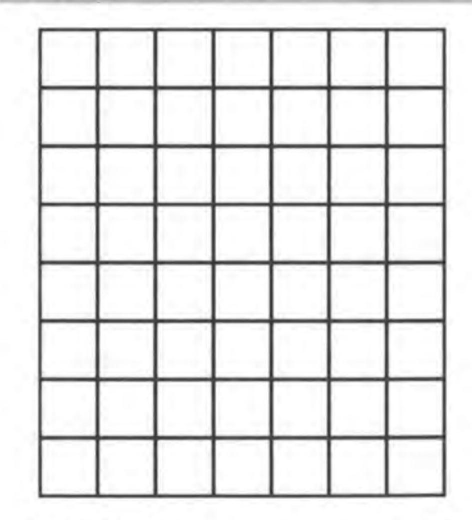
Area = ... cm²

b) Draw another rectangle with the same perimeter but different area:



Perimeter = ... cm

Area = ... cm²



Perimeter = ... cm

Area = ... cm²

Read, then solve:

a) **Sally** is building a garden. She plans to build a rectangular garden measuring 6 meters by 3 meters. She wants to put a net over top of the garden to keep the birds out. She has 12 square meters of netting in her garage. How much more netting will Sally need to cover her whole garden?

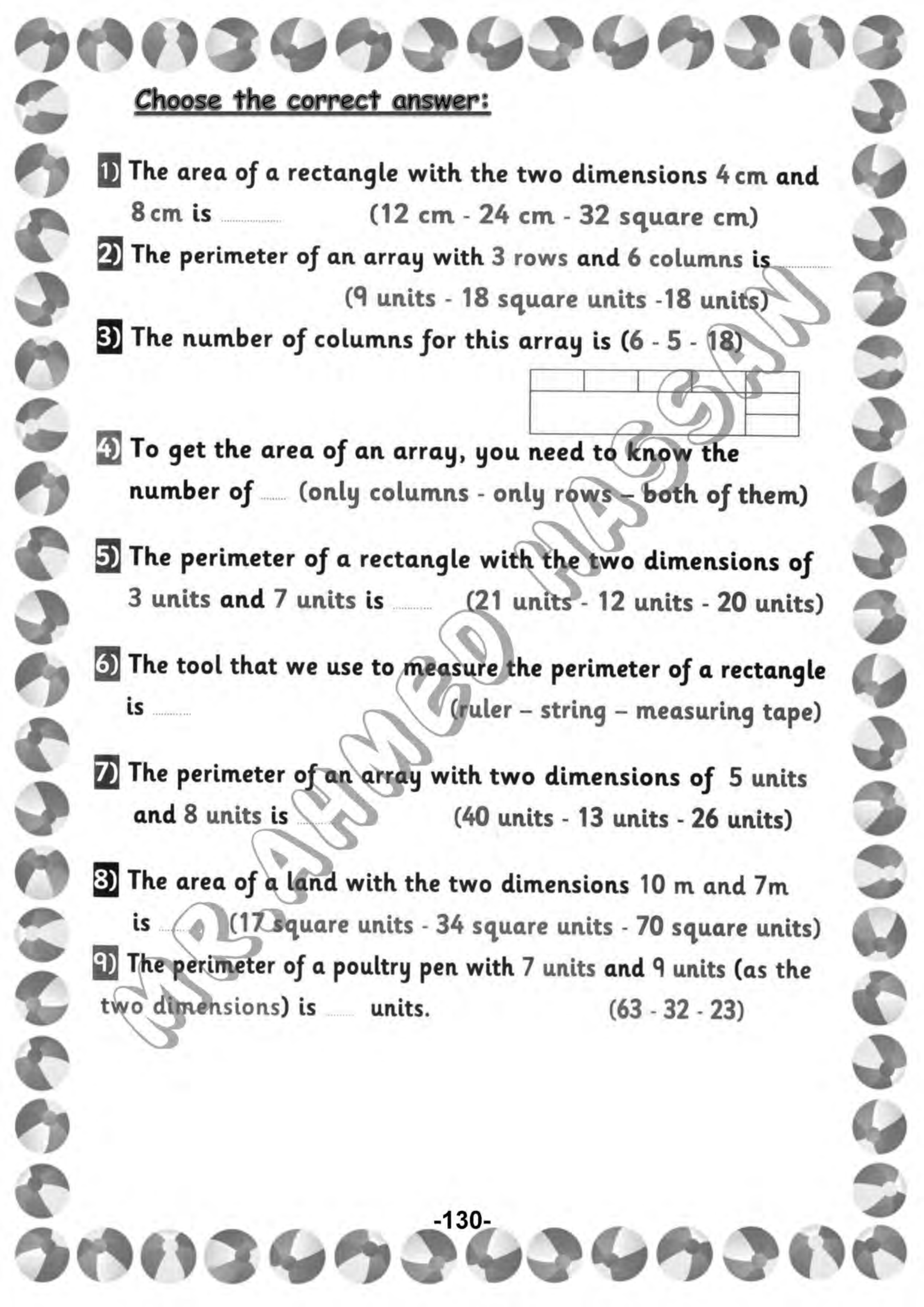


- The area of fence = ... square meters.
- What Sally needs = ... square meters.

b) **Nihal** needs to help her parents and put a fence around their pool. They want the fence to be square and want each side to measure 6 meters. They already Have 10 meters of fencing. How many meters do his parents need to complete the fence?



- The length of the fence = ... meters.
- The needed length = ... meters.



Choose the correct answer:

1) The area of a rectangle with the two dimensions 4 cm and 8 cm is .... (12 cm - 24 cm - 32 square cm)

2) The perimeter of an array with 3 rows and 6 columns is .... (9 units - 18 square units -18 units)

3) The number of columns for this array is (6 - 5 - 18)

4) To get the area of an array, you need to know the number of .... (only columns - only rows – both of them)

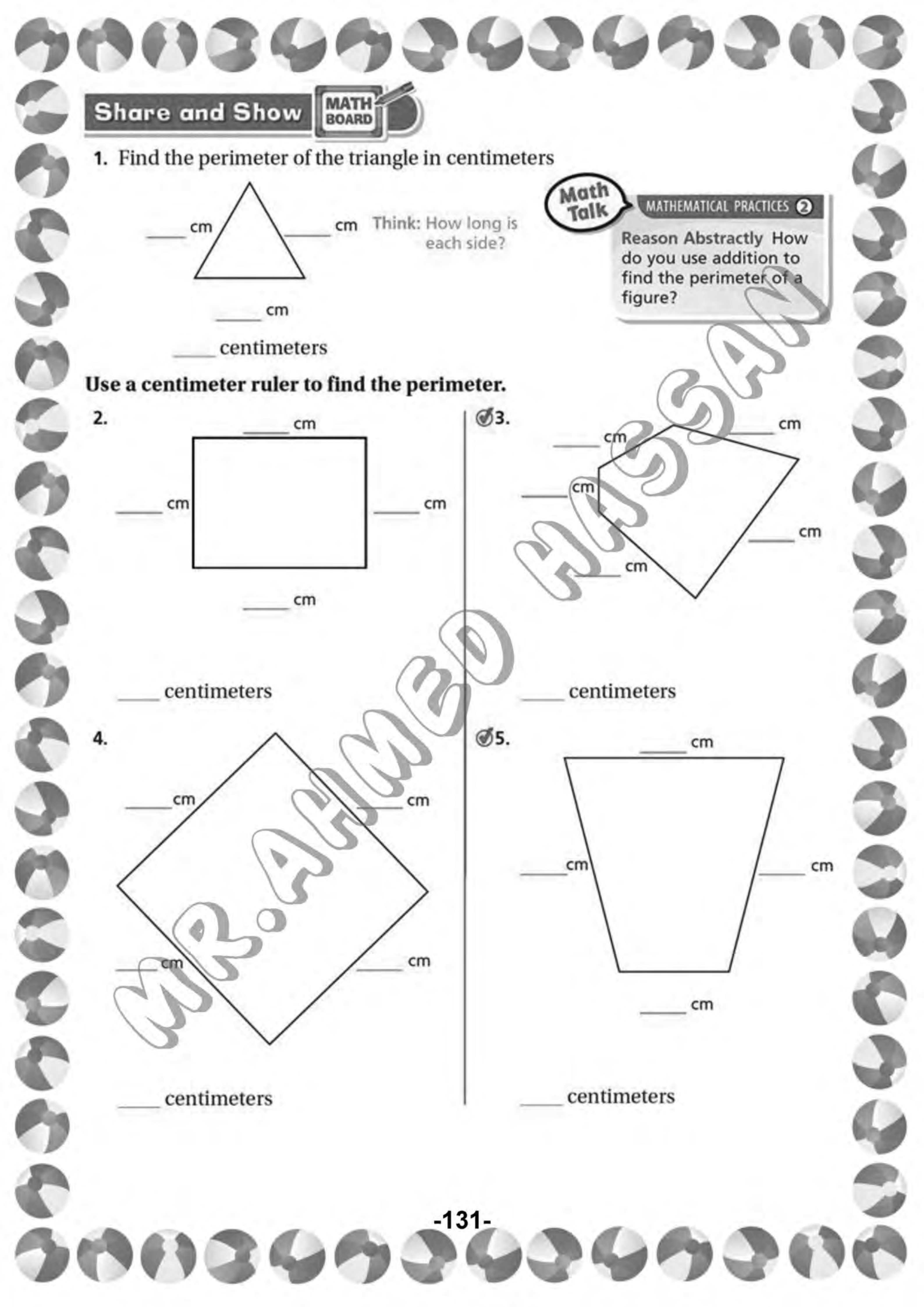
5) The perimeter of a rectangle with the two dimensions of 3 units and 7 units is .... (21 units - 12 units - 20 units)

6) The tool that we use to measure the perimeter of a rectangle is .... (ruler – string – measuring tape)

7) The perimeter of an array with two dimensions of 5 units and 8 units is .... (40 units - 13 units - 26 units)

8) The area of a land with the two dimensions 10 m and 7m is .... (17 square units - 34 square units - 70 square units)

9) The perimeter of a poultry pen with 7 units and 9 units (as the two dimensions) is .... units. (63 - 32 - 23)



Share and Show MATH BOARD

1. Find the perimeter of the triangle in centimeters

____ cm ____ cm ____ cm

Think: How long is each side?

____ centimeters

Math Talk — MATHEMATICAL PRACTICES 2

Reasoning Abstractly How do you use addition to find the perimeter of a figure?

Use a centimeter ruler to find the perimeter.

2. ____ cm ____ cm ____ cm ____ cm

____ centimeters

3. ____ cm ____ cm ____ cm ____ cm ____ cm

____ centimeters

4. ____ cm ____ cm ____ cm ____ cm

____ centimeters

5. ____ cm ____ cm ____ cm ____ cm

____ centimeters

Use a ruler to find the perimeter.

1. 4 cm, 3 cm, 3 cm, 2 cm

12 centimeters

2. ___cm, ___cm, ___cm, ___cm, ___cm

______ centimeters

Problem Solving Real World

Draw a picture to solve 3–4.

3. Evan has a square sticker that measures 5 centimeters each side. What is the perimeter of the sticker?

____

4. Sophie draws a shape that has 6 sides. Each side is 3 centimeters. What is the perimeter of the shape?

____

5. WRITE *Math* Draw two different figures that each have a perimeter of 20 units.

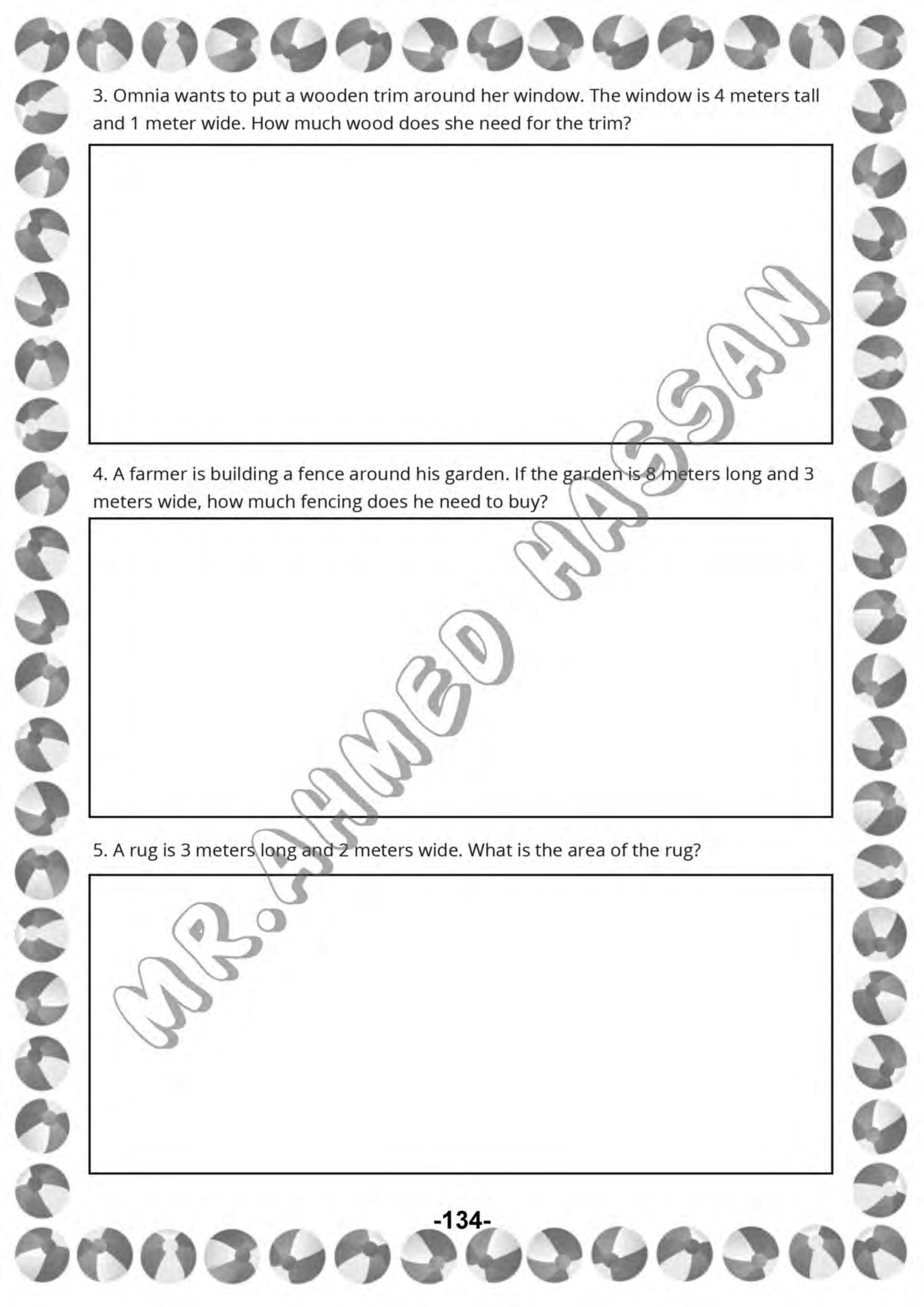
____



Part 1 Directions: **Solve the story problems below. Include a drawing and an equation for each problem. Be sure to label your answers.**

1. Shaimaa is sewing a border on a square baby blanket. The length of the blanket is 45 centimeters and the width is 45 centimeters. How long will the border be?

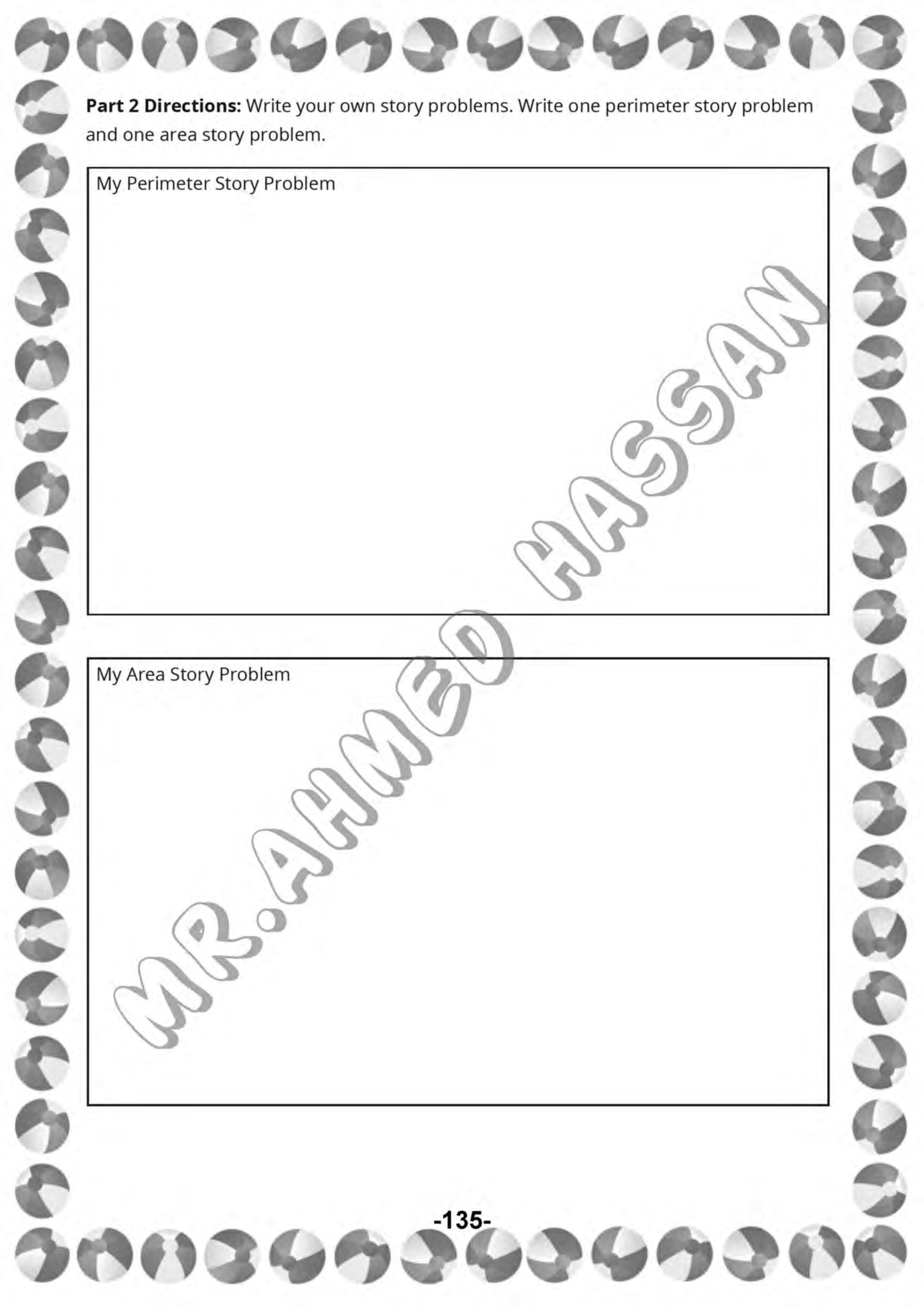
2. Farouk is building a patio out of tiles. He wants the length of the patio to be 7 tiles across and its width to be 6 tiles. How many tiles will he use in all to build the patio?



3. Omnia wants to put a wooden trim around her window. The window is 4 meters tall and 1 meter wide. How much wood does she need for the trim?

4. A farmer is building a fence around his garden. If the garden is 8 meters long and 3 meters wide, how much fencing does he need to buy?

5. A rug is 3 meters long and 2 meters wide. What is the area of the rug?



Part 2 Directions: Write your own story problems. Write one perimeter story problem and one area story problem.

My Perimeter Story Problem

My Area Story Problem

Lesson 50: Multiplying by 10

Complete:

40 x .... = 120

60 x .... = 240

.... x 7 = 560

.... x 9 = 540

40 x .... = 400

.... x 4 = 360

50 x 6 = ...

70 x .... = 140

8 x .... = 320

.... x 9 = 630

Write the multiplication equation for each of the following:

a)

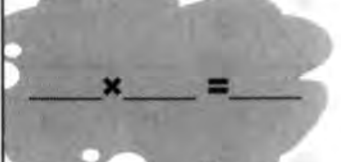




____ × ____ = ____

b)

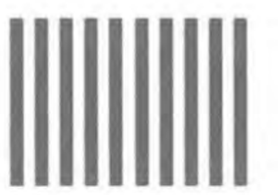


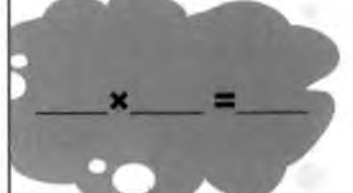


____ × ____ = ____

c)







____ × ____ = ____

d)



____ × ____ = ____

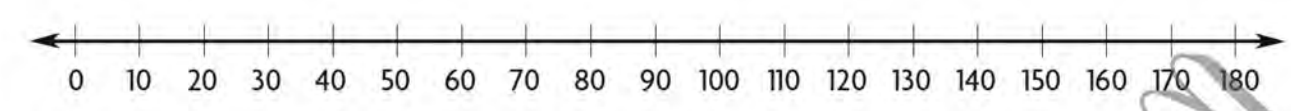


Share and Show

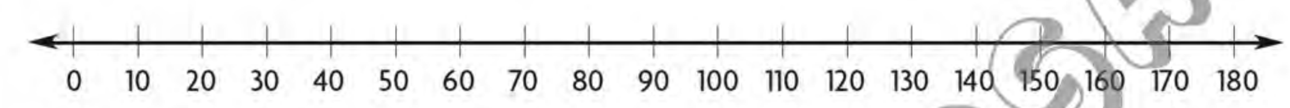


Use a number line to find the product.

1. $3 \times 40 =$ ____ Think: There are 3 jumps of 40.



2. $8 \times 20 =$ ____



Use place value to find the product.

3. $3 \times 70 = 3 \times$ ____ tens

$=$ ____ tens $=$ ____

4. $50 \times 2 =$ ____ tens $\times 2$

$=$ ____ tens $=$ ____

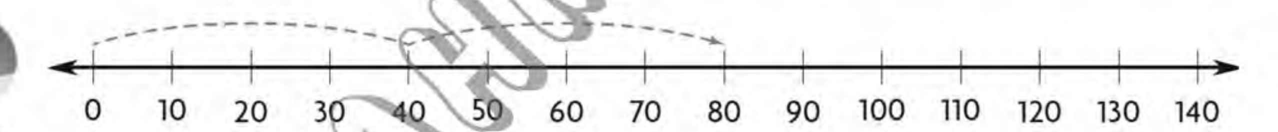
Math Talk

MATHEMATICAL PRACTICES 8

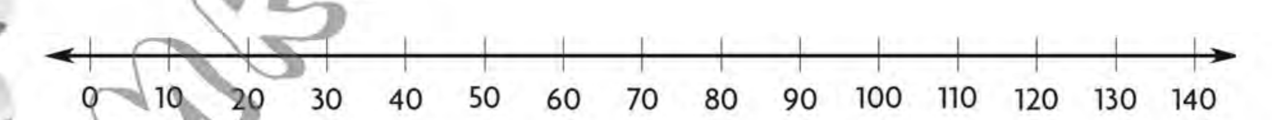
Use Repeated Reasoning Why will the product of a multiplication problem be the same when the factors are reversed?

Use a number line to find the product.

1. $2 \times 40 =$ 80



2. $4 \times 30 =$ ____



Use place value to find the product.

3. $5 \times 70 = 5 \times$ ____ tens

$=$ ____ tens $=$ ____

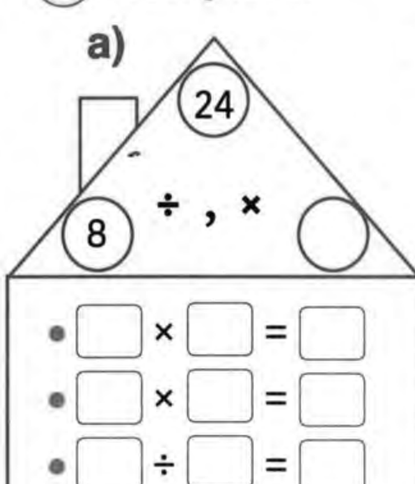
4. $60 \times 4 =$ ____ tens $\times 4$

$=$ ____ tens $=$ ____

Exercises on chapter5

1 Complete:

a)

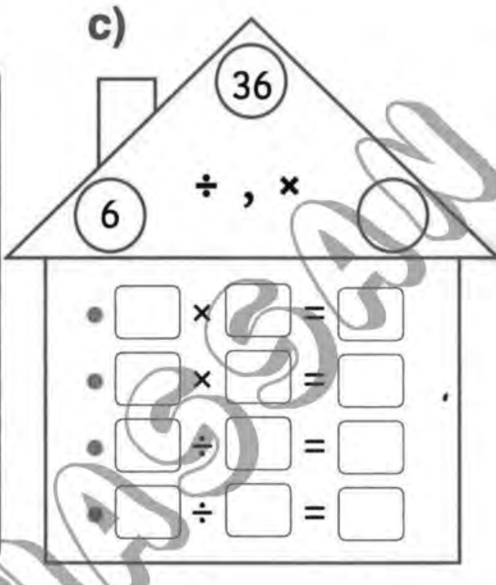


- ☐ × ☐ = ☐
- ☐ × ☐ = ☐
- ☐ ÷ ☐ = ☐
- ☐ ÷ ☐ = ☐

b)

- ☐ × ☐ = ☐
- ☐ ÷ ☐ = ☐

c)

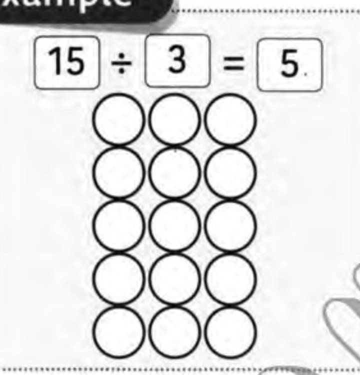


- ☐ × ☐ = ☐
- ☐ × ☐ = ☐
- ☐ ÷ ☐ = ☐
- ☐ ÷ ☐ = ☐

2 Use ◯ counters to form pictures to solve the division problems.

Example

15 ÷ 3 = 5



a) 24 ÷ 6 = ☐

b) 14 ÷ 2 = ☐

c) 40 ÷ 10 = ☐

d) 27 ÷ 9 = ☐

e) 18 ÷ 2 = ☐

3 The perimeter and area of each pen in the farm:

a) Rabbit pen

Perimeter = ... meters.
Area = ... square meters.

b) Duck pen

Perimeter = ... meters.
Area = ... square meters.

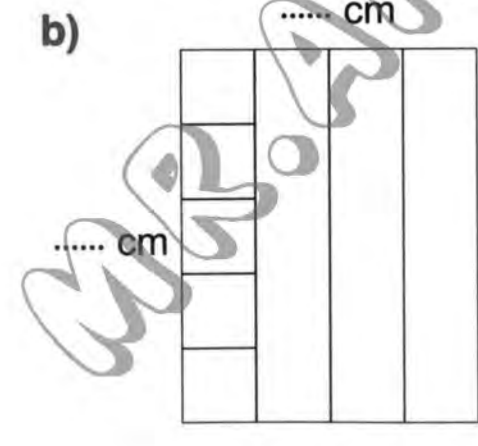
4 Show 2 ways to find the area of the following rectangles:

a) ...... m (top side), ... m (left side)

Way 1:
Area = ... [.........]

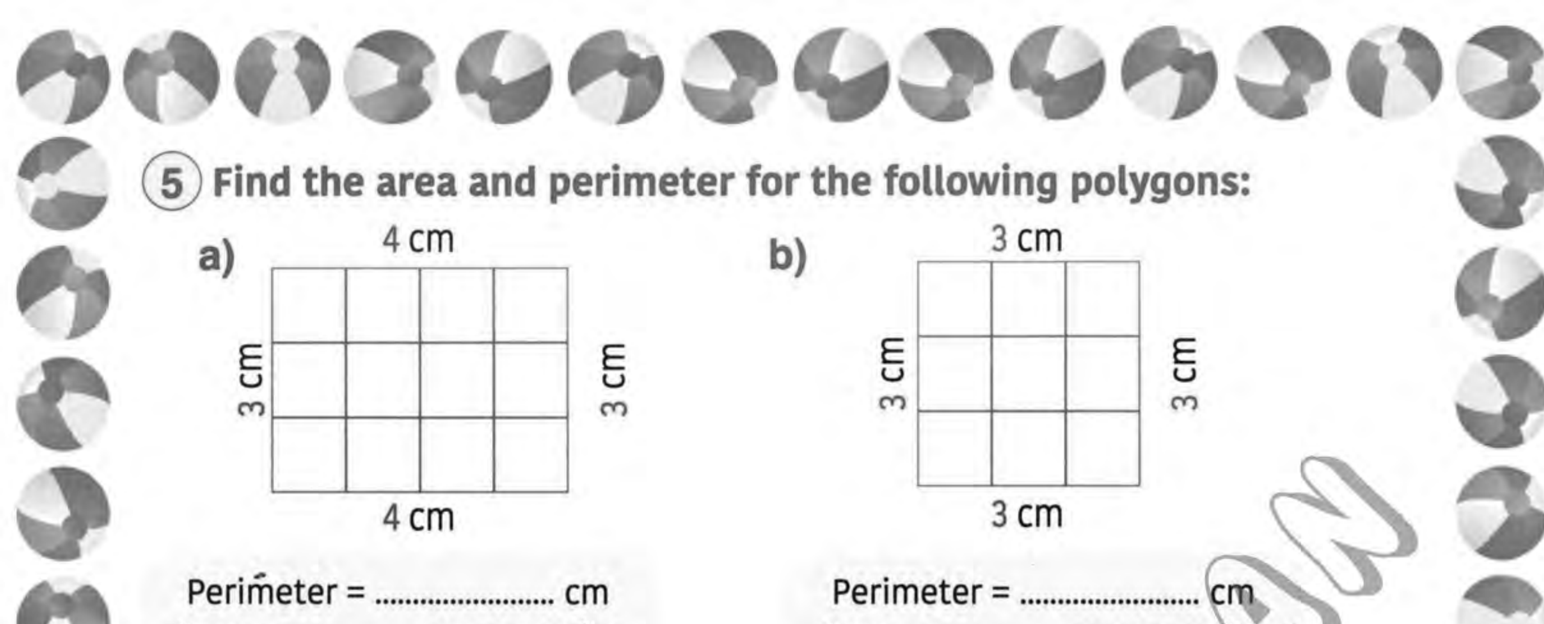
Way 2:
Area = ... [.........]

b)



Way 1:
Area = ... [.........]

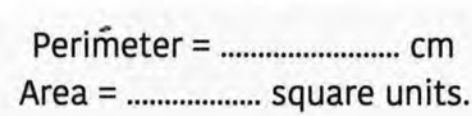
Way 2:
Area = ... [.........]



⑤ Find the area and perimeter for the following polygons:

a) 4 cm × 3 cm grid

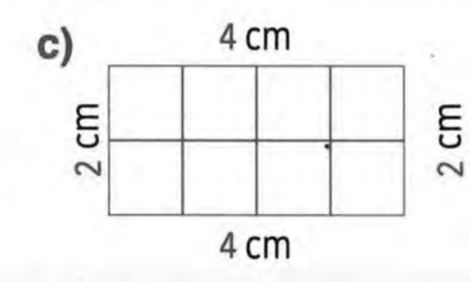
b) 3 cm × 3 cm grid



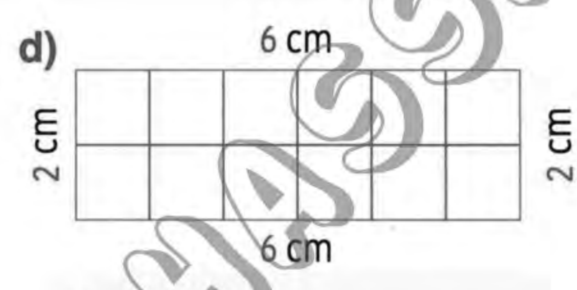
Perimeter = ... cm
Area = ... square units.

Perimeter = ... cm
Area = ... square units.

c)



d)



Perimeter = ... cm
Area = ... square units.

Perimeter = ... cm
Area = ... square units.

⑥ Use your ruler to draw 2 different rectangles with an area of 8 square cm:

a)

Length = ...
Width = ...

Area = ... cm^2
Perimeter = ... cm

b)

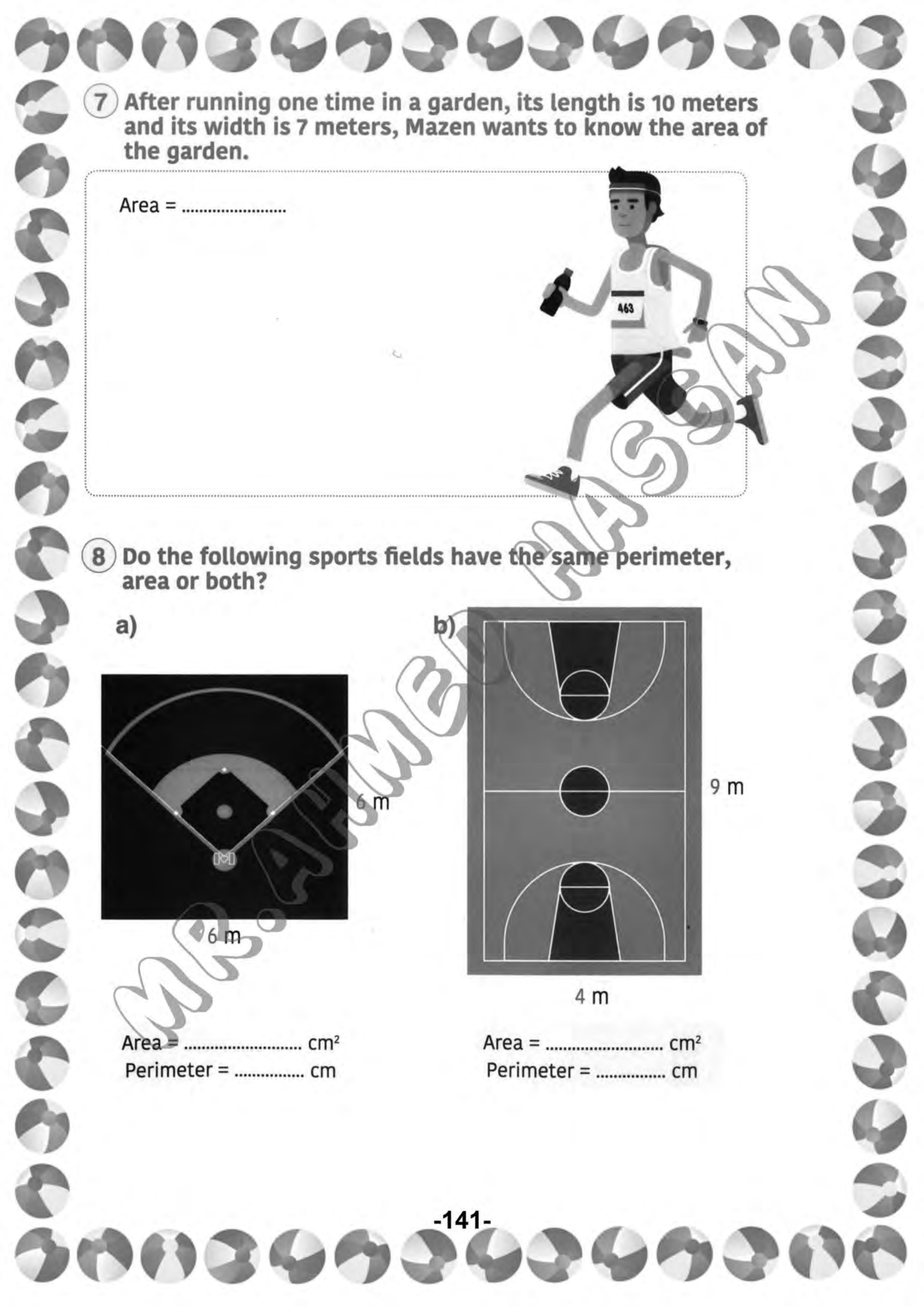
Length = ...
Width = ...

Area = ... cm^2
Perimeter = ... cm

7. **After running one time in a garden, its length is 10 meters and its width is 7 meters, Mazen wants to know the area of the garden.**

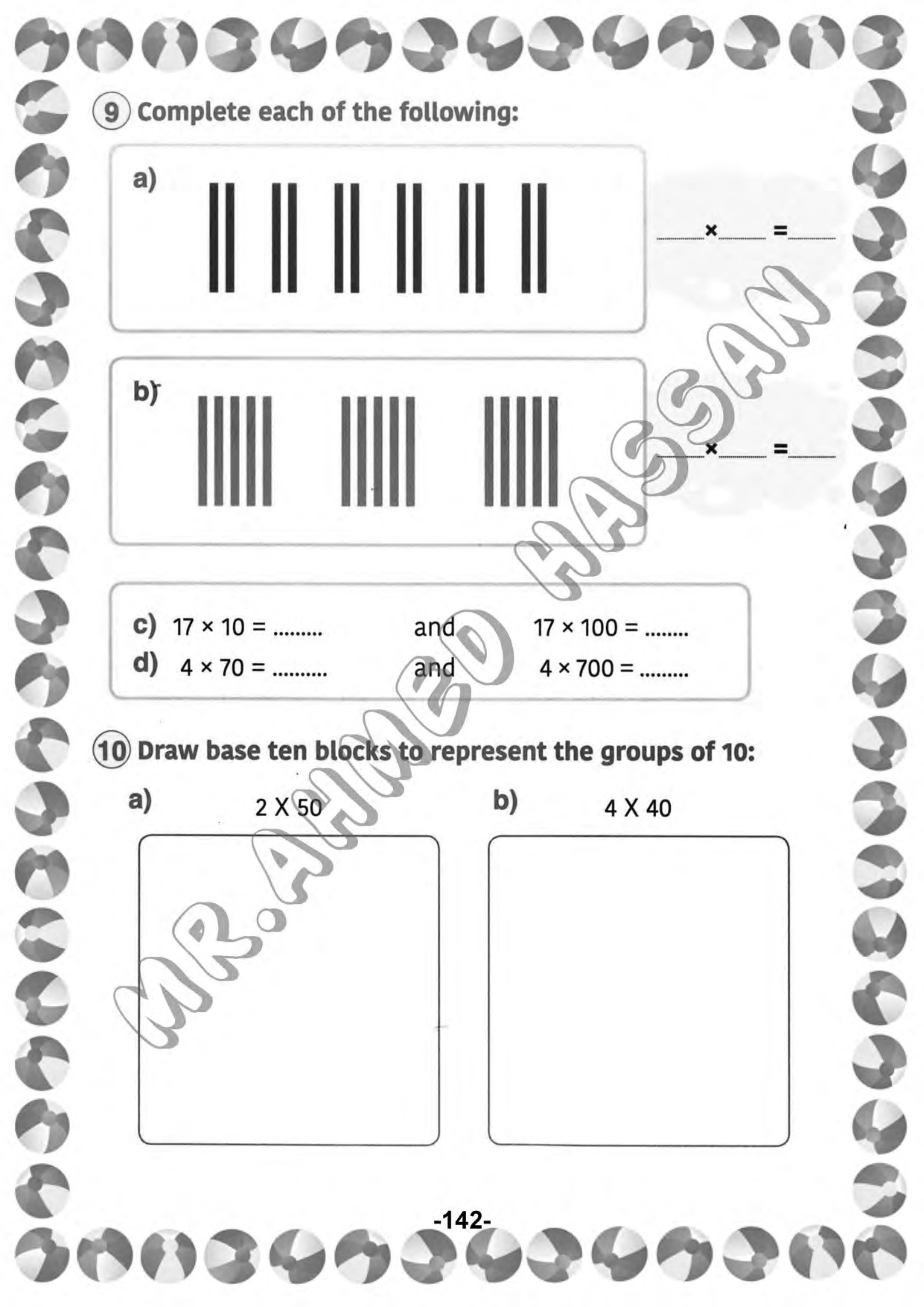
Area = ...

8. **Do the following sports fields have the same perimeter, area or both?**



a) Area = ... cm²
Perimeter = ... cm

b) Area = ... cm²
Perimeter = ... cm



⑨ Complete each of the following:

a)

______ × ______ = ______

b)

______ × ______ = ______

c) 17 × 10 = ... and 17 × 100 = ...

d) 4 × 70 = ... and 4 × 700 = ...

⑩ Draw base ten blocks to represent the groups of 10:

a) 2 X 50

b) 4 X 40

Additional Exercises

1 Complete:

1) The area of poultry farm with the two dimensions 10 m and 5 m, is .... square meters.

2) The perimeter of the figure (5 cm, 3 cm, 4 cm) is = ... cm.

3) The length of a fence with the two dimensions 8 m and 5 m is .... meters.

4) The perimeter of the figure (1 cm, 1 cm, 1 cm, 1 cm, 1 cm, 1 cm) = ... cm.

5) Two arrays can be of equal area and different in ....

6) 5 × 90 = ...

7) 3 × 4 × 10 = ...

2 Choose the correct answer:

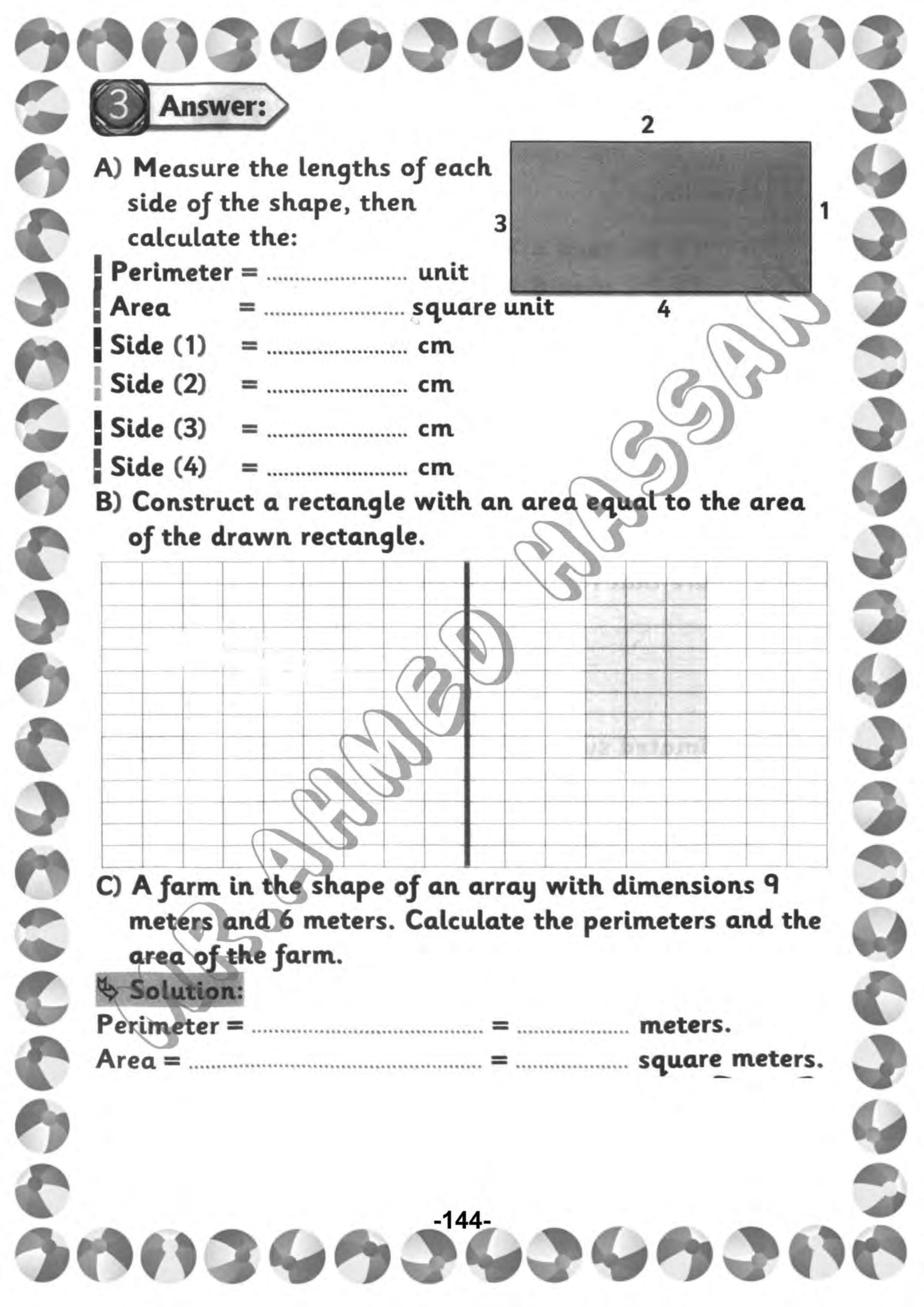
1- The area of a rectangle with the two dimensions 2 cm and 5 cm is (7 cm square - 10 cm square - 14 cm square)

2- The tool that helps us measure the perimeter is a (protractor - ruler - graduated cylinder).

3- The perimeter of the figure (20 cm - 19 cm - 21 cm).



4- 2 × 4 × 30 (90 - 240 - 280).



3 Answer:

A) Measure the lengths of each side of the shape, then calculate the:

- Perimeter = ... unit
- Area = ... square unit
- Side (1) = ... cm
- Side (2) = ... cm
- Side (3) = ... cm
- Side (4) = ... cm

B) Construct a rectangle with an area equal to the area of the drawn rectangle.

C) A farm in the shape of an array with dimensions 9 meters and 6 meters. Calculate the perimeters and the area of the farm.

Solution:

Perimeter = ... = ... meters.

Area = ... = ... square meters.

Lesson 51: Patterns of multiplying by 10

Directions: Solve the problems below. Split the multiples of 10 into 10 and the other factor. For example, 40 has the factors 10 and 4.

Example:

8 × 40

(8 × 4) × 10 = 320

3 × 90 (____ × ____) × 10 =	**4 × 80** (____ × ____) × 10 =
9 × 20 (____ × ____) × 10 =	**6 × 30** (____ × ____) × 10 =
8 × 50 (____ × ____) × 10 =	**7 × 30** (____ × ____) × 10 =
6 × 70 (____ × ____) × 10 =	**5 × 40** (____ × ____) × 10 =

CHALLENGE: Malek bought a box of cards. In the box there were 6 smaller boxes, and in each of those boxes there were 6 packs of 10 cards. To find the total number of cards he bought, Malek wrote this equation: 6 × 60 = 360. Is he correct? Explain how you know.

On Your Own

Find the product.

1. $4 \times 50 =$ 200
2. $60 \times 3 =$ ______
3. ______ $= 60 \times 5$

Find the product.

4. $\begin{array}{r} 80 \\ \times\ 3 \\ \hline \end{array}$
5. $\begin{array}{r} 50 \\ \times\ 2 \\ \hline \end{array}$
6. $\begin{array}{r} 60 \\ \times\ 7 \\ \hline \end{array}$
7. $\begin{array}{r} 70 \\ \times\ 4 \\ \hline \end{array}$

8. $6 \times 90 =$ ____
9. $9 \times 70 =$ ____
10. $8 \times 90 =$ ____

Find the product. Use base-ten blocks or draw a quick picture on your MathBoard.

11. $8 \times 50 =$ ____
12. ____ $= 3 \times 90$
13. $2 \times 80 =$ ____

Find the product.

14. $\begin{array}{r} 80 \\ \times\ 3 \\ \hline \end{array}$
15. $\begin{array}{r} 60 \\ \times\ 9 \\ \hline \end{array}$
16. $\begin{array}{r} 90 \\ \times\ 8 \\ \hline \end{array}$
17. $\begin{array}{r} 80 \\ \times\ 8 \\ \hline \end{array}$

Practice: Copy and Solve **Find the product.**

18. 6×70
19. 9×90
20. 70×8
21. 90×7

Lesson 52: Multiplying by 9

Group 3: 120 Chart Strategy

Directions: Shade in all the multiples of 9. Next to the chart, record what patterns you notice.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

Describe the patterns you observe.

CHALLENGE: Record all the multiplication equations below. See if you can find products beyond those you colored in the 120 Chart.

Group 4: Tens Facts Strategy

Directions: You can use what you know about multiplying by 10 to quickly multiply by 9. Look at the example below. Solve and discuss each problem with your group.

9×6

First draw a model of 10×6 and then cross out one group of 6. Now there are 9 groups of 6.

6	6	6	6	6	6	6	6	6	~~6~~

$10 \times 6 = 60$

$60 - 6$ = ______ so 9×6 = ______

9×5

10×5 = ______ so 9×5 = ______

9×7

10×7 = ______ so 9×7 = ______

9×3

10×3 = ______ So 9×3 = ______

9×2

10×2 = ______ so 9×2 = ______

Lesson 53: Addition and multiplication strategies

Match between the problems and their strategies:

a) 2×6, 6×2

b) $8 + 3$

c) 8×0

d) $7 + 9$

e) $5 + 4$, $4 + 5$

1) Zero is a hero 0

2) Doubling strategy $(7 + 7) + 2 = 16$

3) Commutative strategy 9

4) Making ten $10 + 1 = 11$

5) Commutative strategy 12



Solve:

7 × 2 = ______

6 × 0 = ______

3 + 9 = ______

1 × 7 = ______

1 + 9 = ______

2 × 4 = ______

9 × 6 = ______

3 + 9 = ______

10 × 8 = ______

3 + 9 = ______

4 × 8 = ______

1 × 1 = ______

3 × 3 = ______

6 × 1 = ______

10 × 0 = ______

2 + 9 = ______

5 × 8 = ______

8 + 9 = ______

0 × 8 = ______

2 × 5 = ______

3 × 9 = ______

4 × 3 = ______

6 + 5 = ______

9 + 9 = ______

9 × 9 = ______

4 × 2 = ______

6 + 6 = ______

3 + 3 = ______

2 × 10 = ______

9 + 10 = ______

2 × 10 = ______

6 + 1 = ______

5 × 10 = ______

9 × 6 = ______

5 × 10 = ______

0 + 10 = ______

2 × 3 = ______

9 + 6 = ______

9 × 10 = ______

1 + 10 = ______

10 + 1 = ______

2 × 3 = ______

0 + 10 = ______

8 × 0 = ______

6 + 5 = ______

3 + 10 = ______

2 × 6 = ______

7 + 3 = ______

0 + 4 = ______

6 × 0 = ______

0 + 4 = ______

8 × 8 = ______

5 + 5 = ______

9 × 0 = ______

6 + 2 = ______

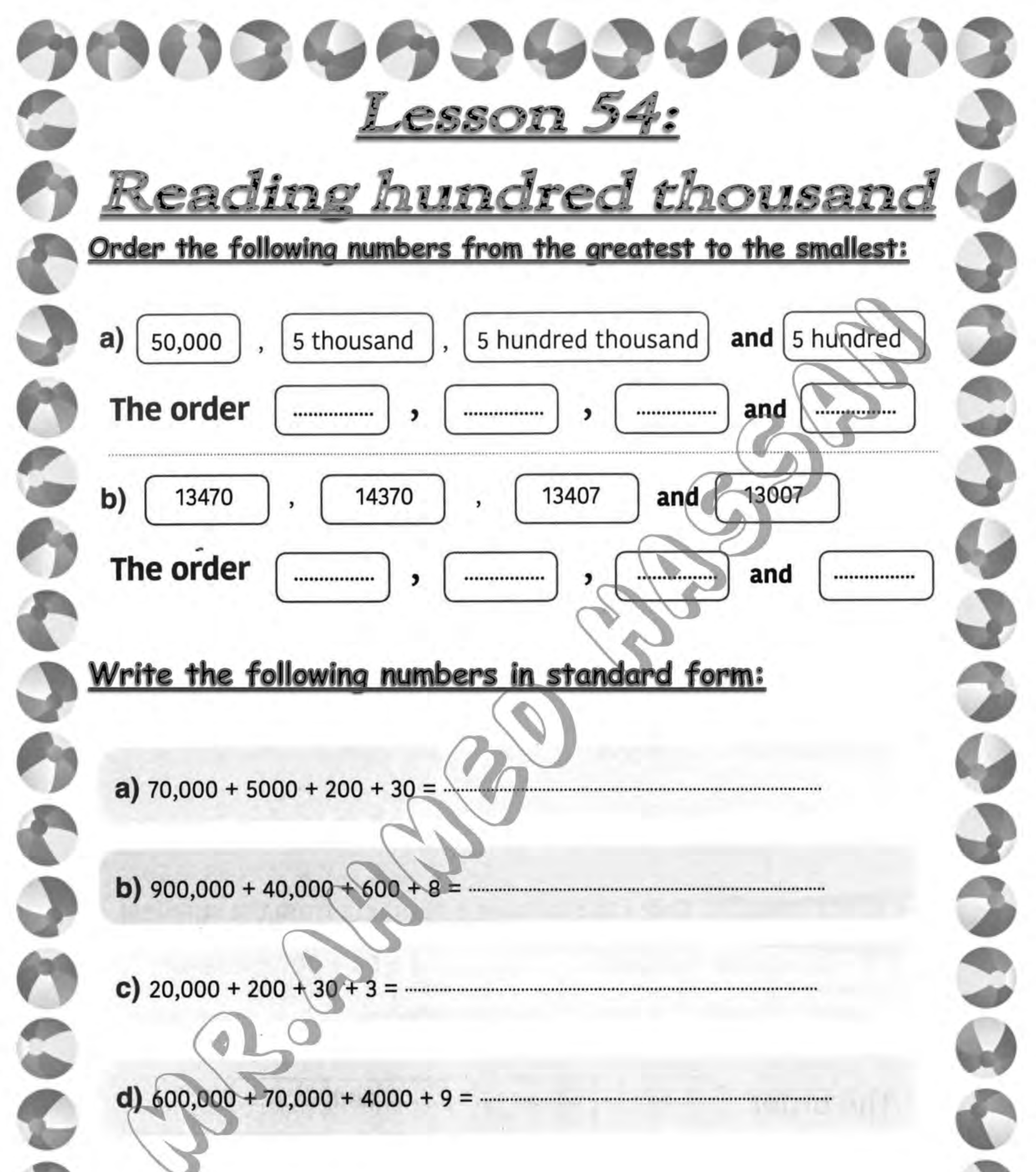
1 × 2 = ______

4 + 4 = ______

6 × 7 = ______

10 + 4 = ______

4 × 2 = ______



Lesson 54:

Reading hundred thousand

Order the following numbers from the greatest to the smallest:

a) 50,000 , 5 thousand , 5 hundred thousand **and** 5 hundred

The order .... , ... , ... **and** ....

b) 13470 , 14370 , 13407 **and** 13007

The order .... , ... , ... **and** ....

Write the following numbers in standard form:

a) 70,000 + 5000 + 200 + 30 = ...

b) 900,000 + 40,000 + 600 + 8 = ...

c) 20,000 + 200 + 30 + 3 = ...

d) 600,000 + 70,000 + 4000 + 9 = ...

Lesson 55: Addition using different strategies

Match the addition problem to its answer and its strategy, then solve it:

a)



1)

Hundreds	Tens	Ones
....	....	....

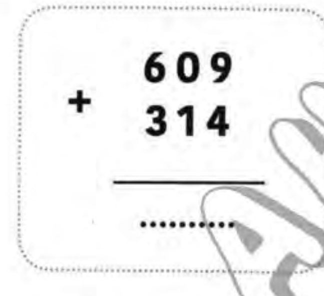
b)

$$\begin{array}{r} 152 \\ +\ 156 \\ \hline \text{..........} \end{array}$$

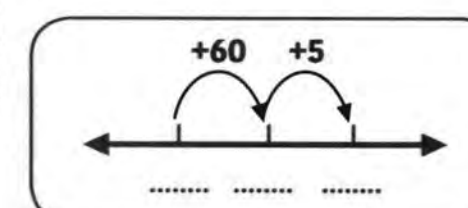
2)

900 + 10 + 13 = ...

c)



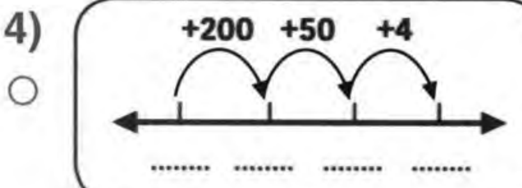
3)



d)



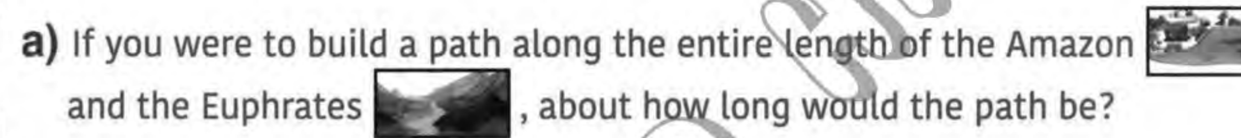
4)



Lesson 56: Data table

The following table shows the lengths of some of the world's longest rivers:

RIVER	APPROXIMATED LENGTH IN KILOMETERS*
Nile	About 6,650 km
Amazon	About 6,400 km
Mississippi	About 3,775 km
Euphrates	About 2,800 km

a) If you were to build a path along the entire length of the Amazon  and the Euphrates , about how long would the path be?

....

b) If you were to paddle the entire length of the Mississippi and the Nile together, Amazon and Mississippi together which length would be the longest?

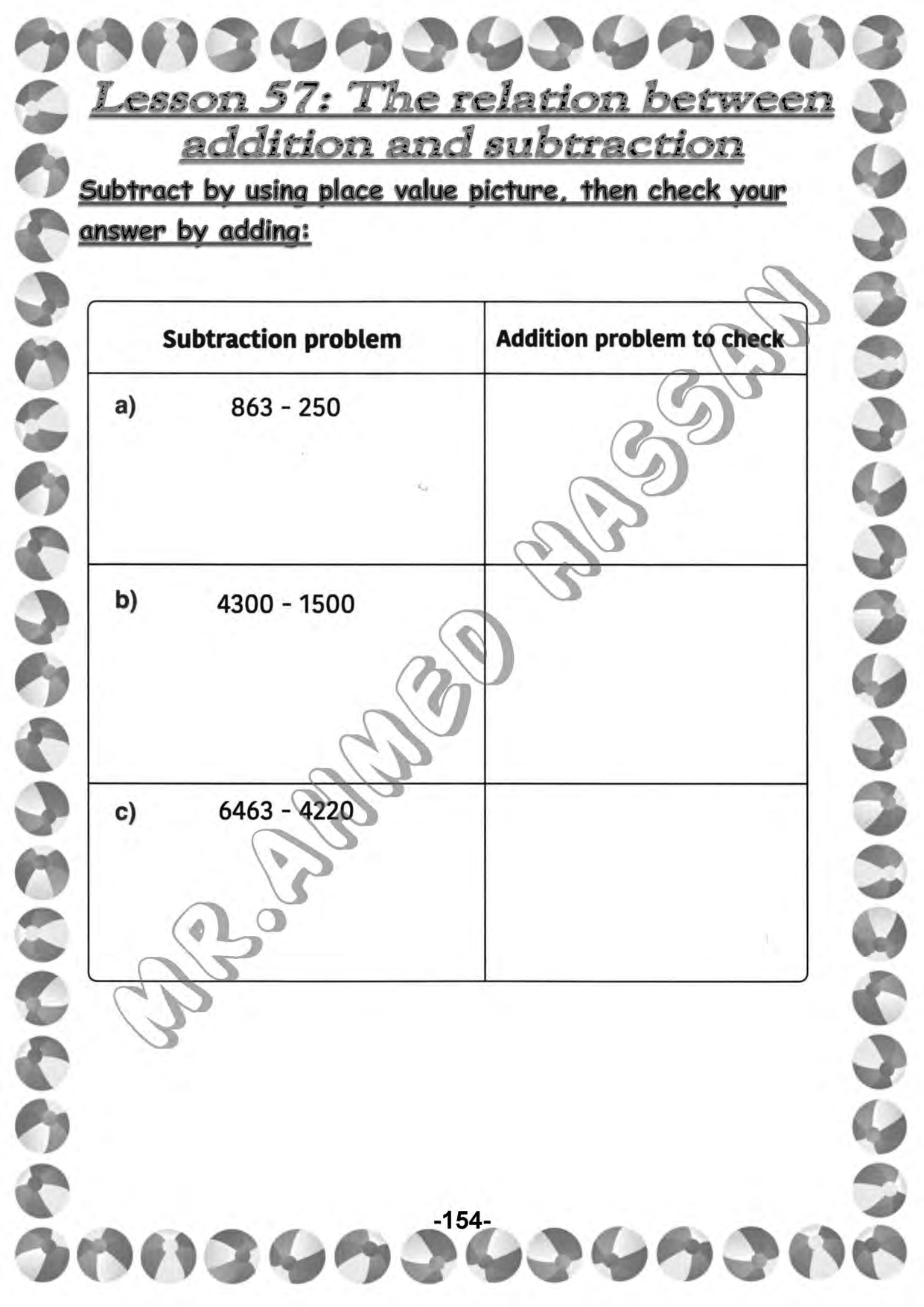
For Mississippi  and the the Nile  together

....

For Amazon  and the Mississippi  together

....

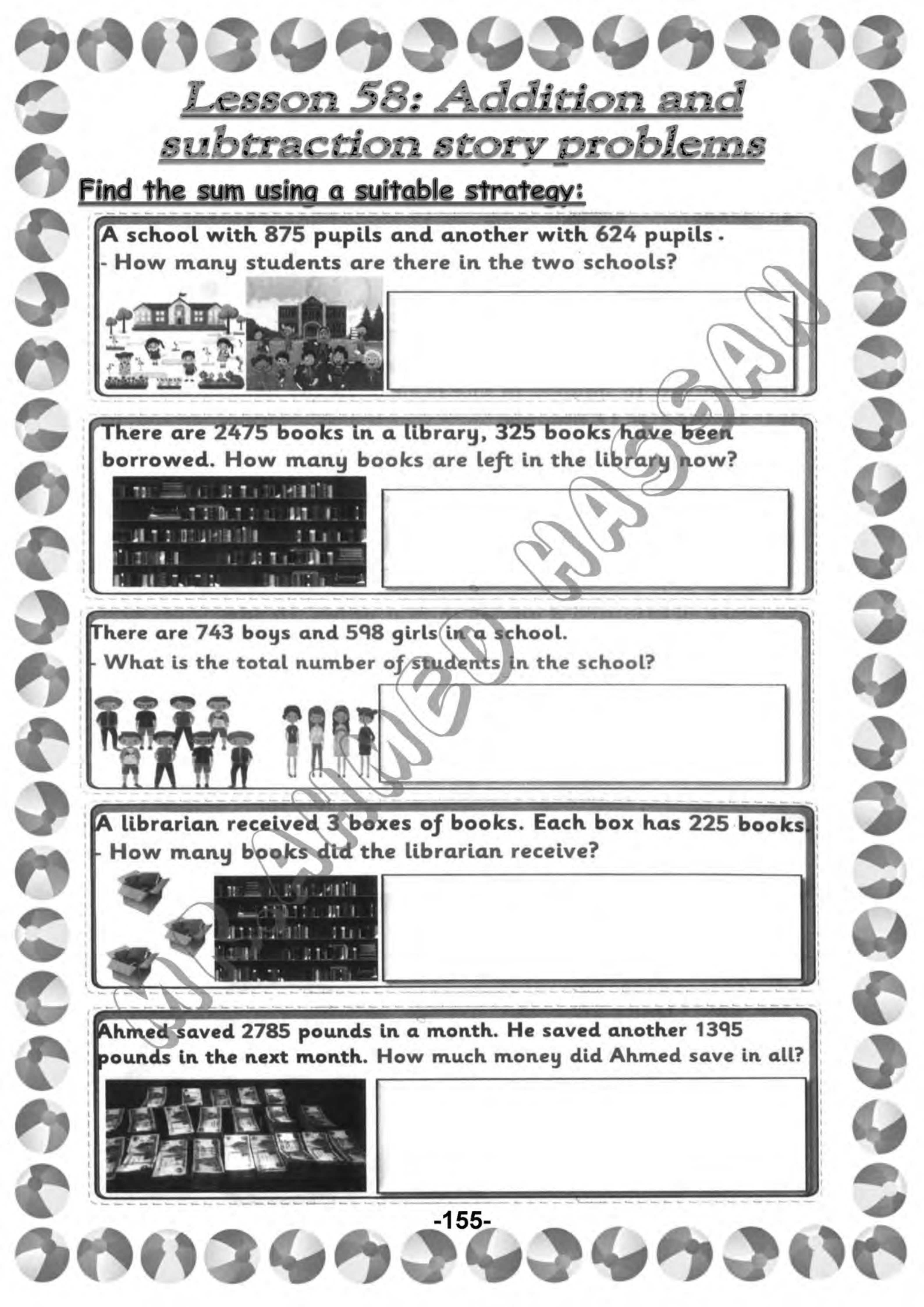
c) So the length of the .... and the .... together is longer than the .... and the ....



Lesson 57: The relation between addition and subtraction

Subtract by using place value picture, then check your answer by adding:

Subtraction problem	Addition problem to check
a) 863 - 250	
b) 4300 - 1500	
c) 6463 - 4220	



Lesson 58: Addition and subtraction story problems

Find the sum using a suitable strategy:

A school with 875 pupils and another with 624 pupils.
- How many students are there in the two schools?

There are 2475 books in a library, 325 books have been borrowed. How many books are left in the library now?

There are 743 boys and 598 girls in a school.
- What is the total number of students in the school?

A librarian received 3 boxes of books. Each box has 225 books.
- How many books did the librarian receive?

Ahmed saved 2785 pounds in a month. He saved another 1395 pounds in the next month. How much money did Ahmed save in all?



Lesson 59:
The volume of liquids

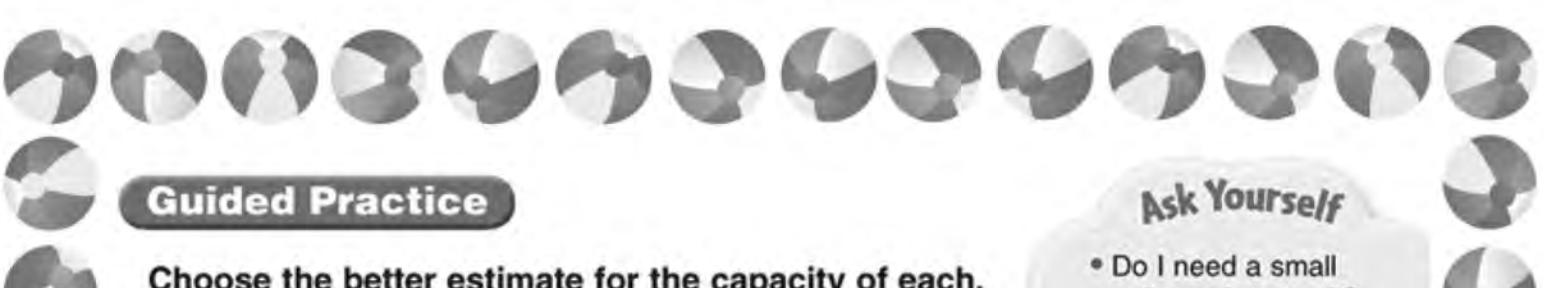
Tick (√) the suitable unit:

Milliliter ◯ Liter ◯	Milliliter ◯ Liter ◯	Milliliter ◯ Liter ◯
Milliliter ◯ Liter ◯	Milliliter ◯ Liter ◯	Milliliter ◯ Liter ◯
Milliliter ◯ Liter ◯	Milliliter ◯ Liter ◯	Milliliter ◯ Liter ◯
Milliliter ◯ Liter ◯	Milliliter ◯ Liter ◯	Milliliter ◯ Liter ◯

Lesson 60: The graduated cylinder to measure liquids

Complete the table by using the suitable volume:

Container	Picture	Volume measurement
a) A cup of coffee		....
b) A large bottle of shampoo		....
c) A bottle of medicine		....
d) A box of juice		....
e) A tank of water		....



Guided Practice

Ask Yourself

- Do I need a small unit or a large unit?
- Which is the smaller unit? the larger unit?

Choose the better estimate for the capacity of each.

1. 
3 L or 30 mL

2. 
1 L or 5 L

3. 

14 L or 14 mL

Choose the unit you would use to measure the capacity of each. Write *mL* or *L*.

4. bathtub **5.** a spoon **6.** a container of milk

Explain Your Thinking ▶ Would you need a larger container to hold 500 mL or to hold 1 L? Explain.

Practice and Problem Solving

Choose the better estimate for the capacity of each.

7. 

100 L or 100 mL

8. 
20 L or 2 L

9. Juice
200 mL or 200 L

Choose the unit you would use to measure the capacity of each. Write *mL* or *L*.

10. a pail **11.** a soup can **12.** a drinking glass

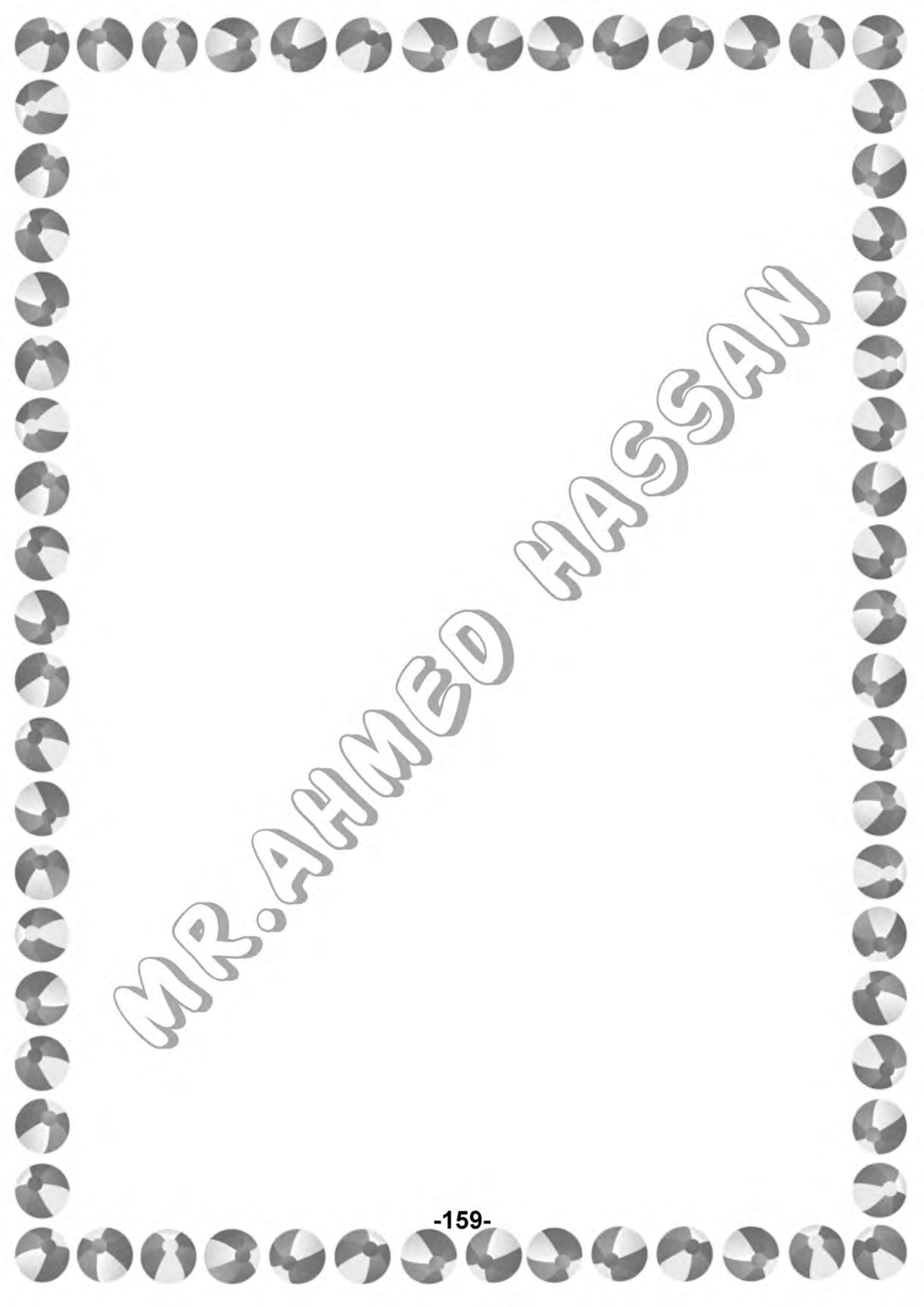
13. a pond **14.** a small vase **15.** a watering can

Solve.

16. Nick poured 2,300 mL of water into a bowl. Then Rea poured 3 L of water into the same bowl. How much water in milliliters is in the bowl now?

17. Reasoning Celia's bottle holds more water than Tim's bottle. One bottle has a red label and holds 2 liters. The other has a blue label and holds 1,500 mL. What color is the label on Tim's bottle?

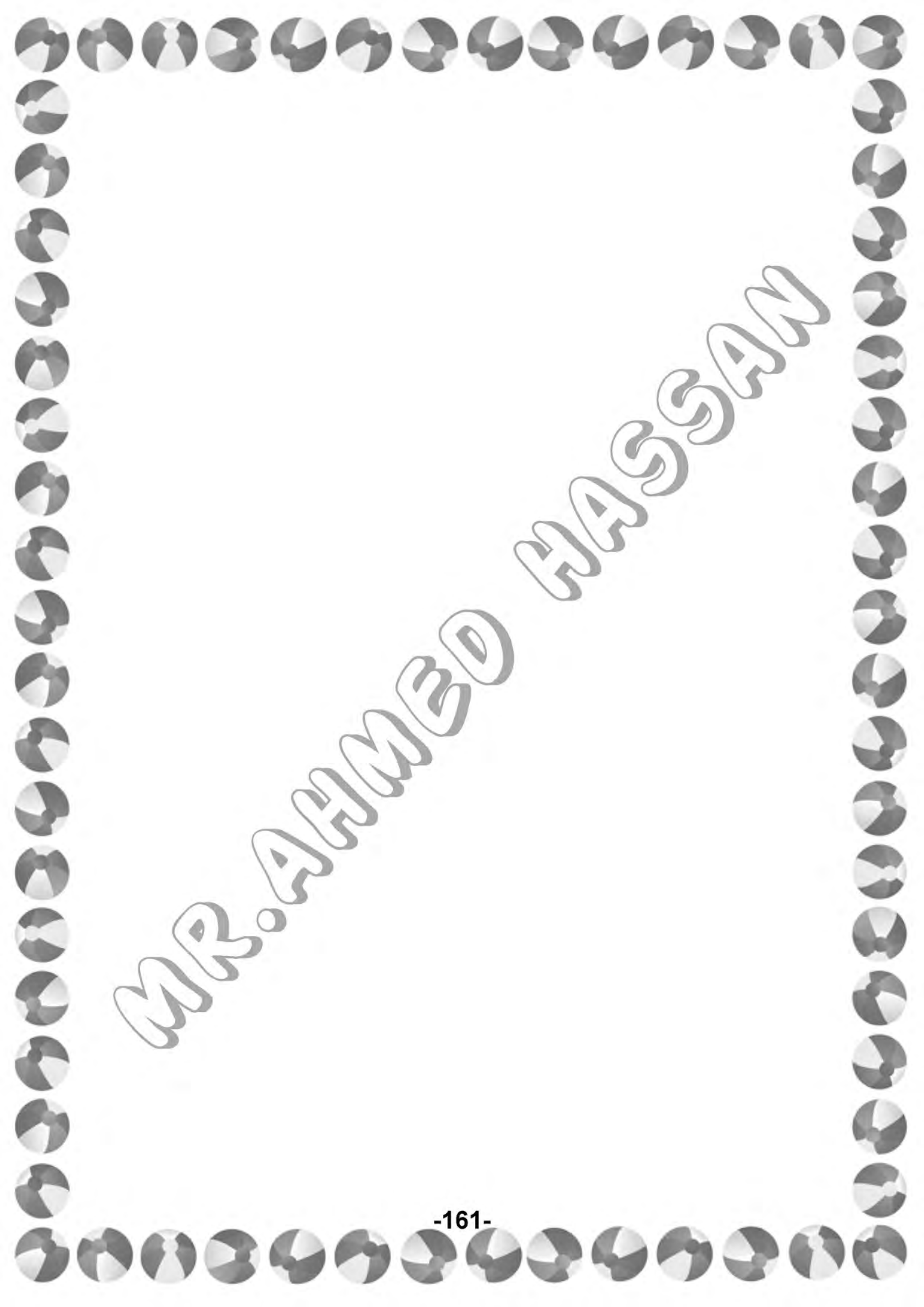


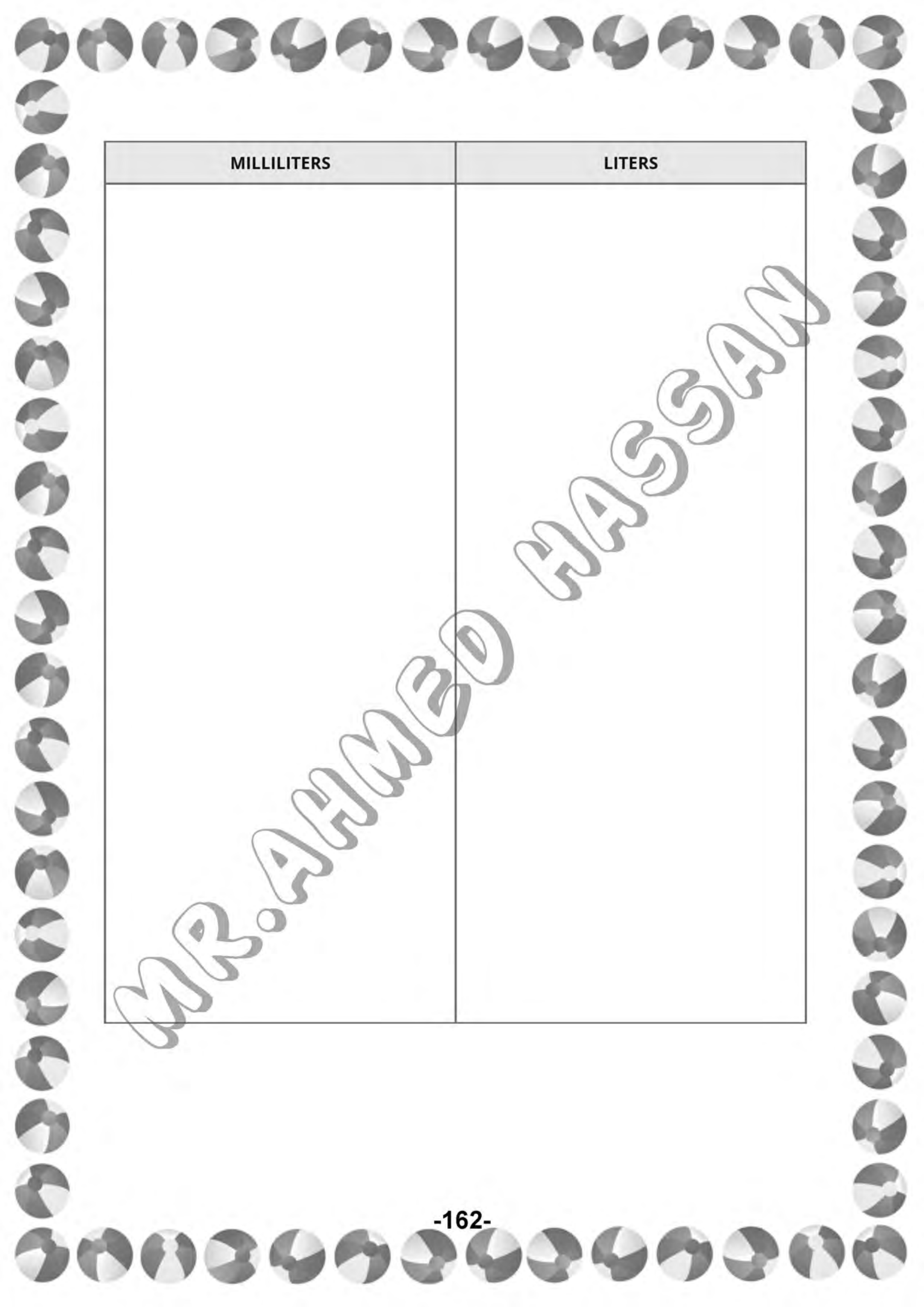




Directions: Cut out the pictures below and then sort them according to whether the liquid volume is best measured in milliliters or liters. When you and your Shoulder Partner are finished, compare your answers. Discuss any areas of disagreement.

Petrol in a car	Soda in a can	Spoonful of medicine
Dishwashing soap	Water in a bottle	Shampoo in a bottle
Juice in a juice box	Water in the bathtub	

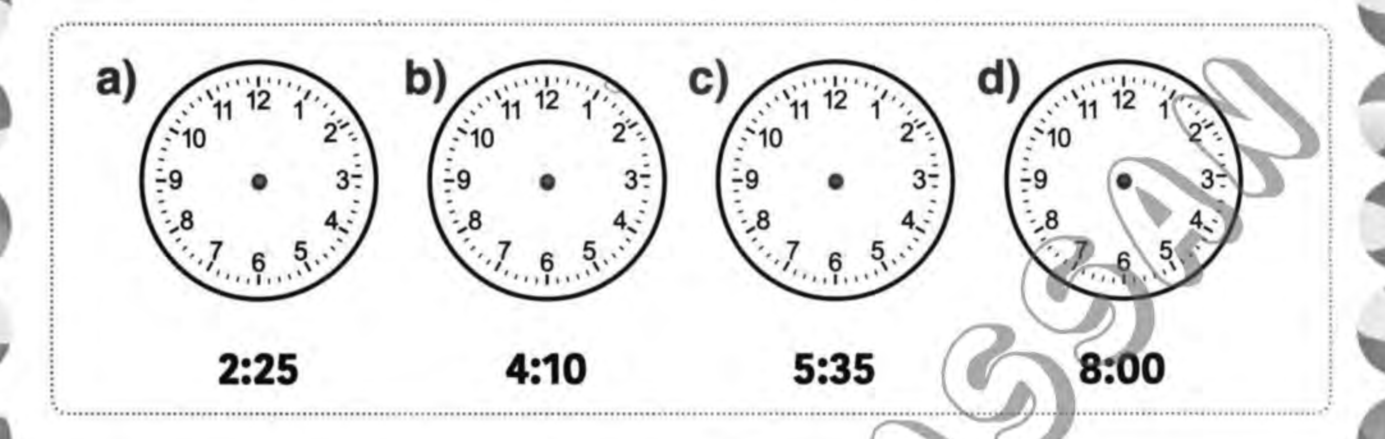




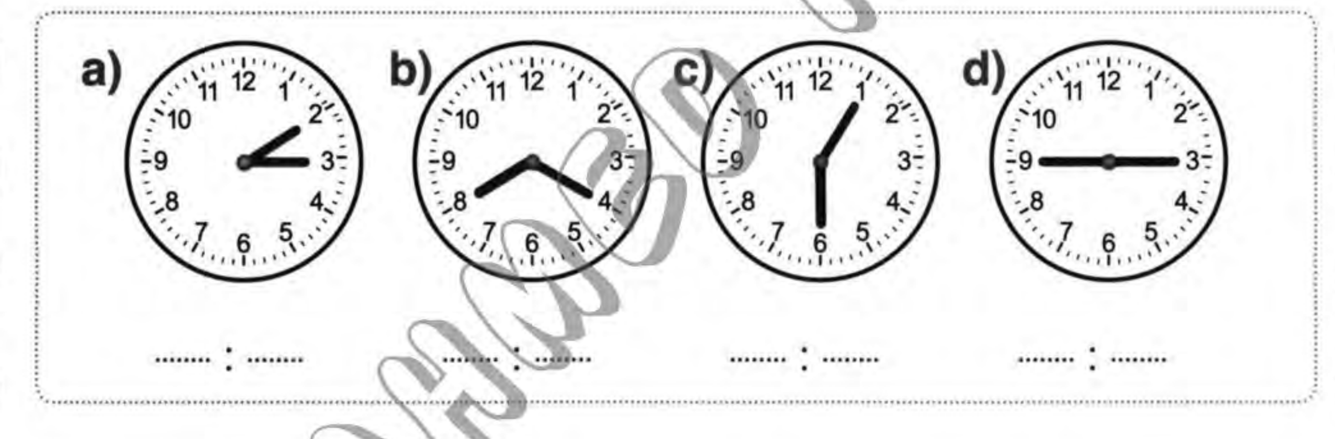
MILLILITERS	LITERS

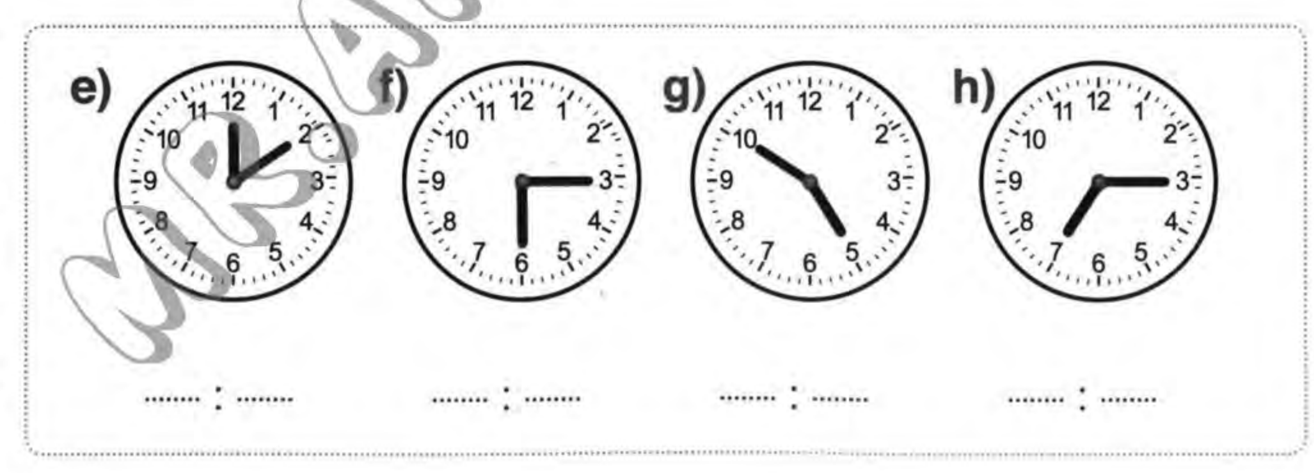
Exercises on chapter6

1 **Draw the hands of clock to show the time:**



2 **Write the digital time for the following clocks:**







③ Solve the following problems:

a)

5 × 30

(........ × ....) × 10 = ...

b)

40 × 6

(........ × ....) × 10 = ...

c)

2 × 60

(........ × ....) × 10 = ...

d)

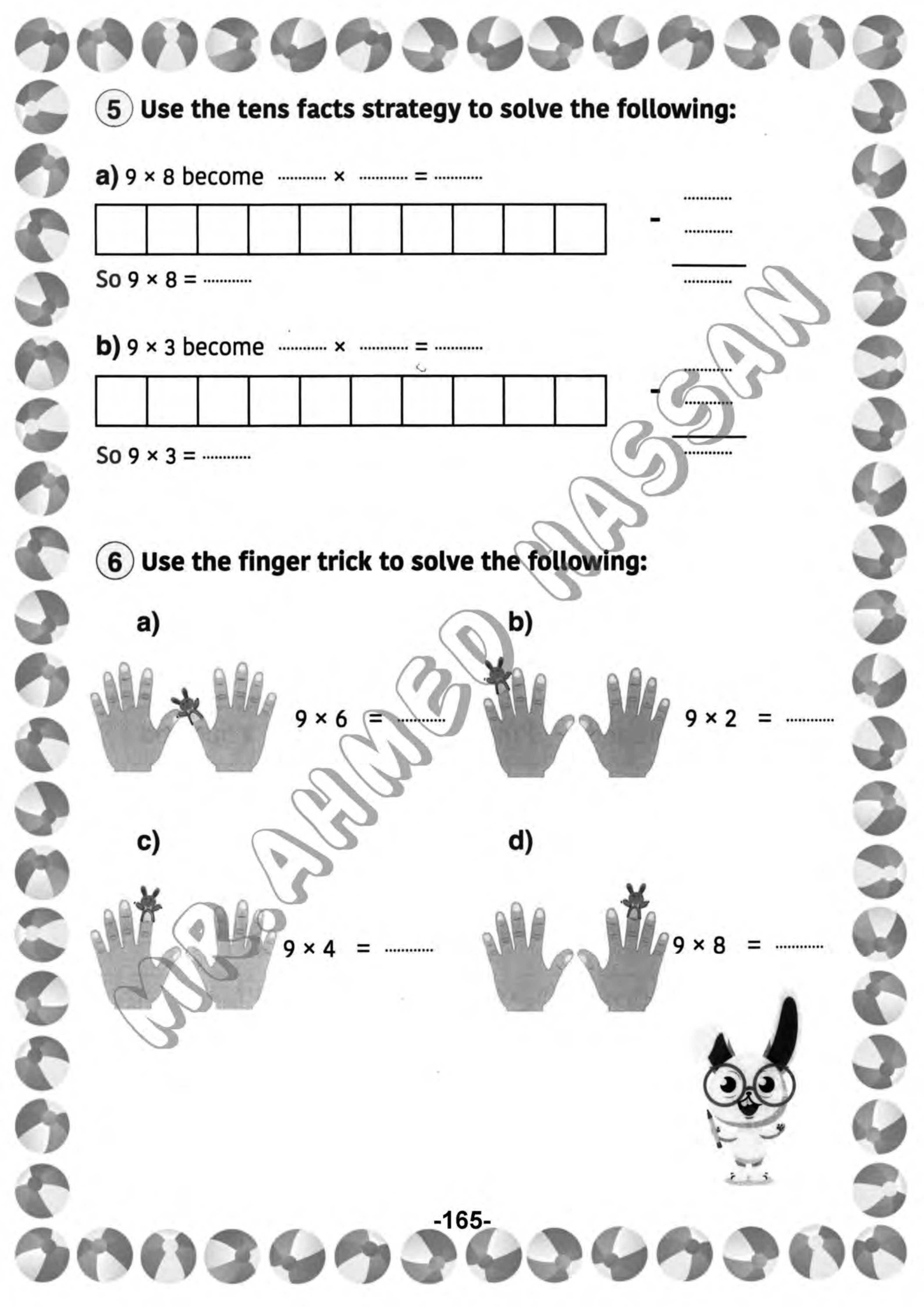
7 × 30

(........ × ....) × 10 = ...

④ Use the following 120-chart to colour the multiples of 9 in red, then record your answer:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

9 × 1 = ...
9 × 2 = ...
9 × 3 = ...
9 × 4 = ...
9 × 5 = ...
9 × 6 = ...
9 × 7 = ...
9 × 8 = ...
9 × 9 = ...
9 × 10 = ...



5 Use the tens facts strategy to solve the following:

a) 9 × 8 become .... × .... = ...

....
\- ....
....

So 9 × 8 = ...

b) 9 × 3 become .... × .... = ...

....
\- ....
....

So 9 × 3 = ...

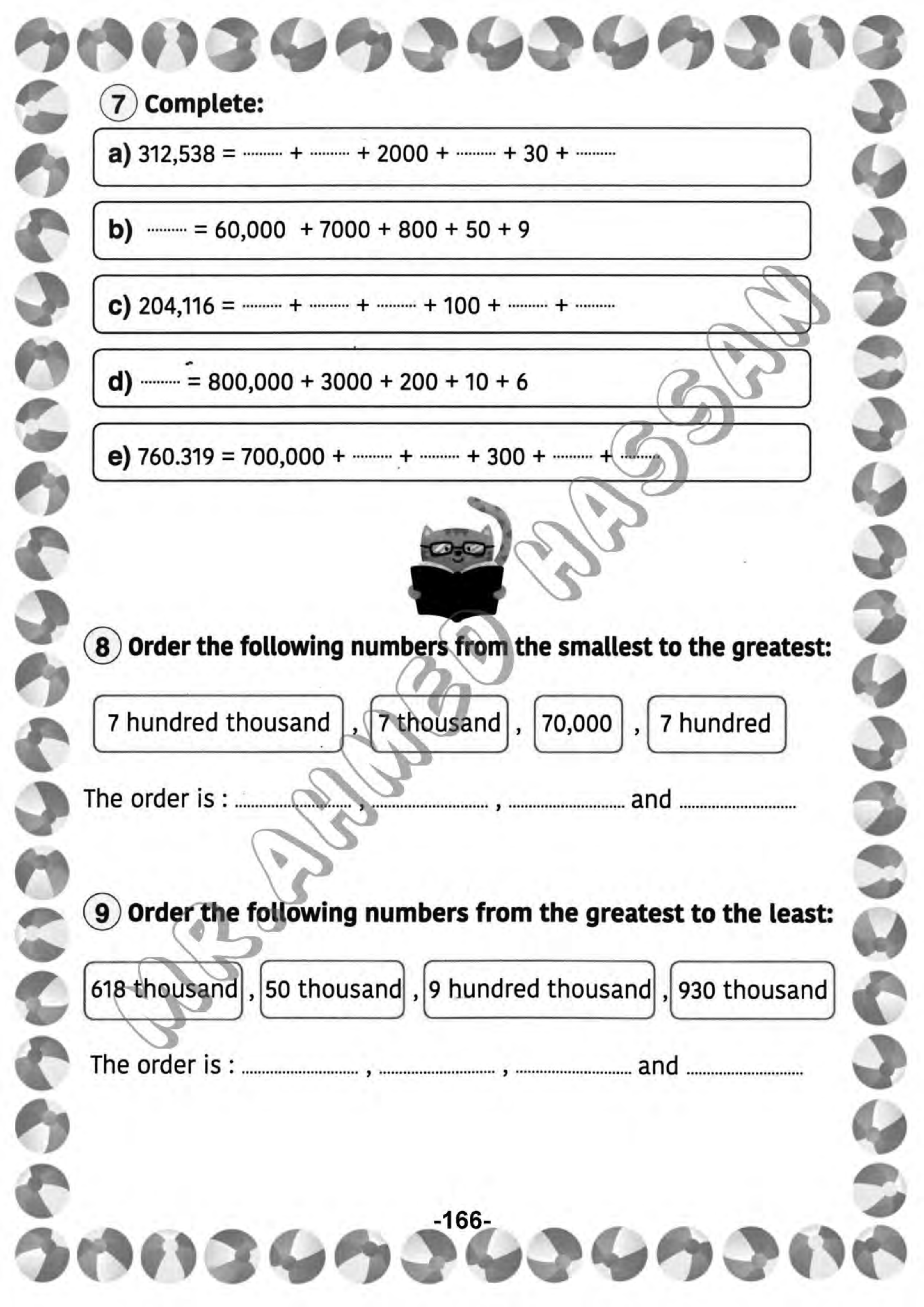
6 Use the finger trick to solve the following:

a) 9 × 6 = ...

b) 9 × 2 = ...

c) 9 × 4 = ...

d) 9 × 8 = ...



7 Complete:

a) 312,538 = ... + ... + 2000 + ... + 30 + ...

b) .... = 60,000 + 7000 + 800 + 50 + 9

c) 204,116 = ... + ... + ... + 100 + ... + ...

d) .... = 800,000 + 3000 + 200 + 10 + 6

e) 760.319 = 700,000 + ... + ... + 300 + ... + ...

8 Order the following numbers from the smallest to the greatest:

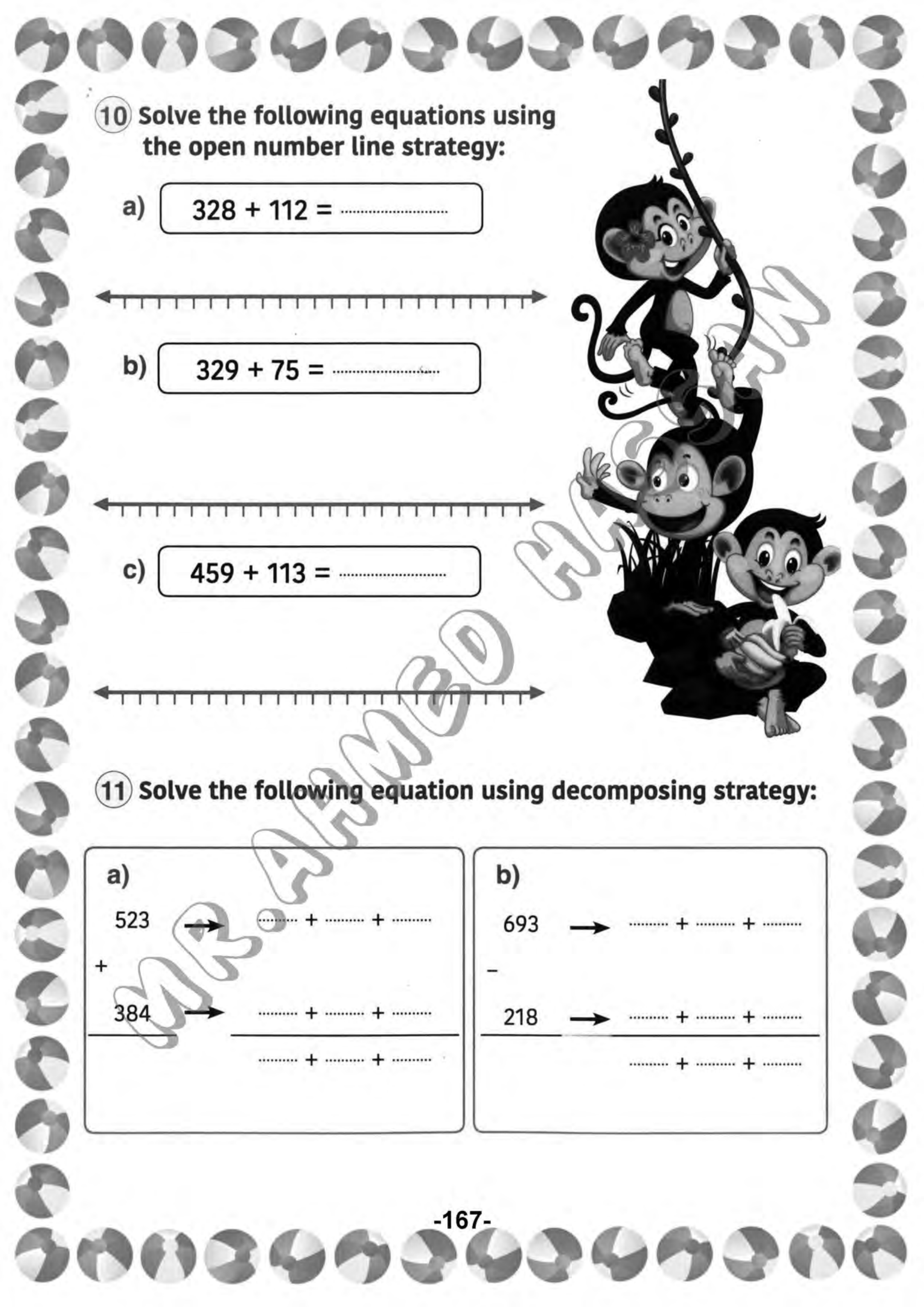
7 hundred thousand , 7 thousand , 70,000 , 7 hundred

The order is : .... , ... , ... and ....

9 Order the following numbers from the greatest to the least:

618 thousand , 50 thousand , 9 hundred thousand , 930 thousand

The order is : .... , ... , ... and ....



⑩ Solve the following equations using the open number line strategy:

a) 328 + 112 = ...

b) 329 + 75 = ...

c) 459 + 113 = ...

⑪ Solve the following equation using decomposing strategy:

a)

523 → .... + ... + ...

\+

384 → .... + ... + ...

.... + ... + ...

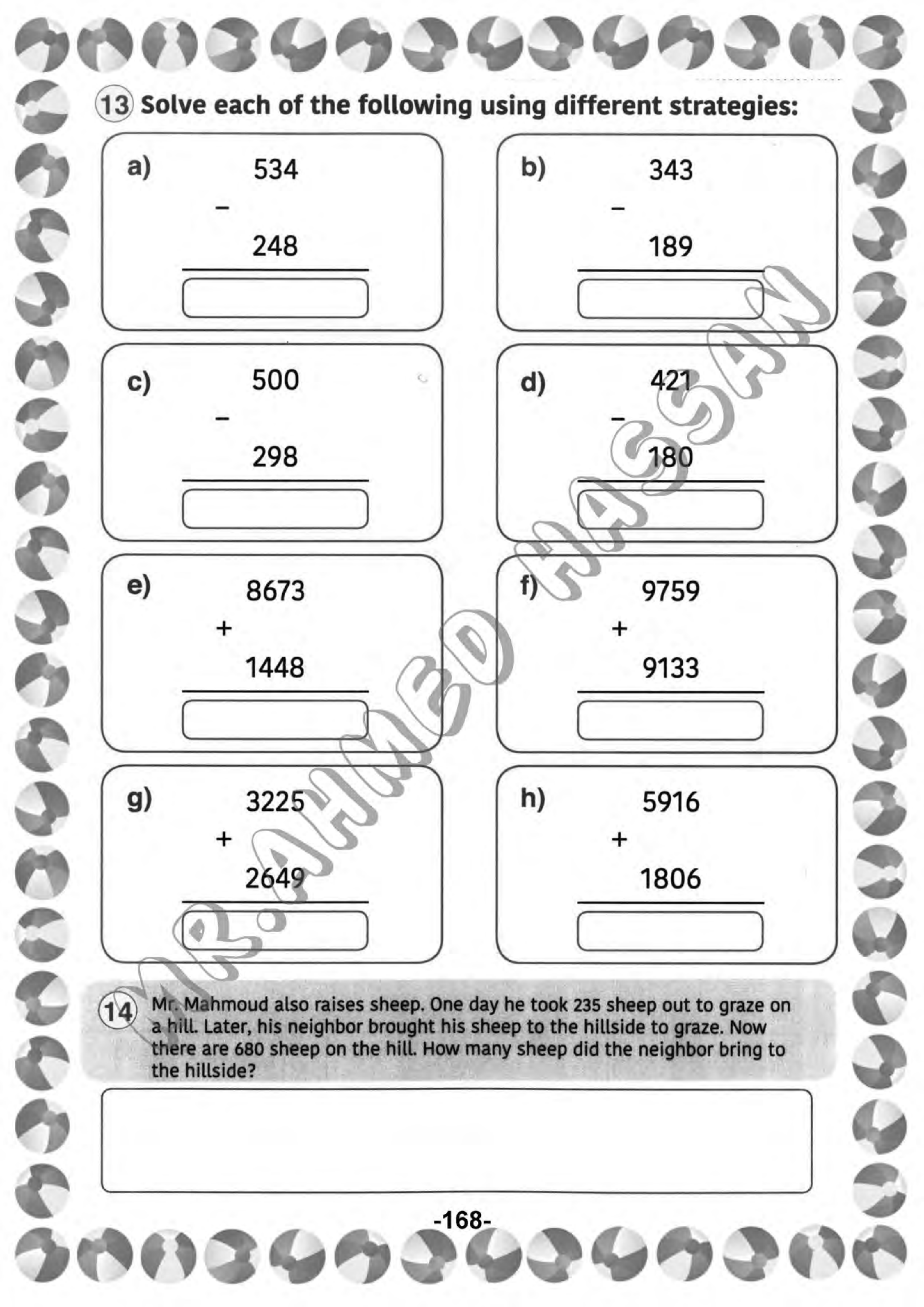
b)

693 → .... + ... + ...

−

218 → .... + ... + ...

.... + ... + ...



13 **Solve each of the following using different strategies:**

a) $534 - 248 = \square$

b) $343 - 189 = \square$

c) $500 - 298 = \square$

d) $421 - 180 = \square$

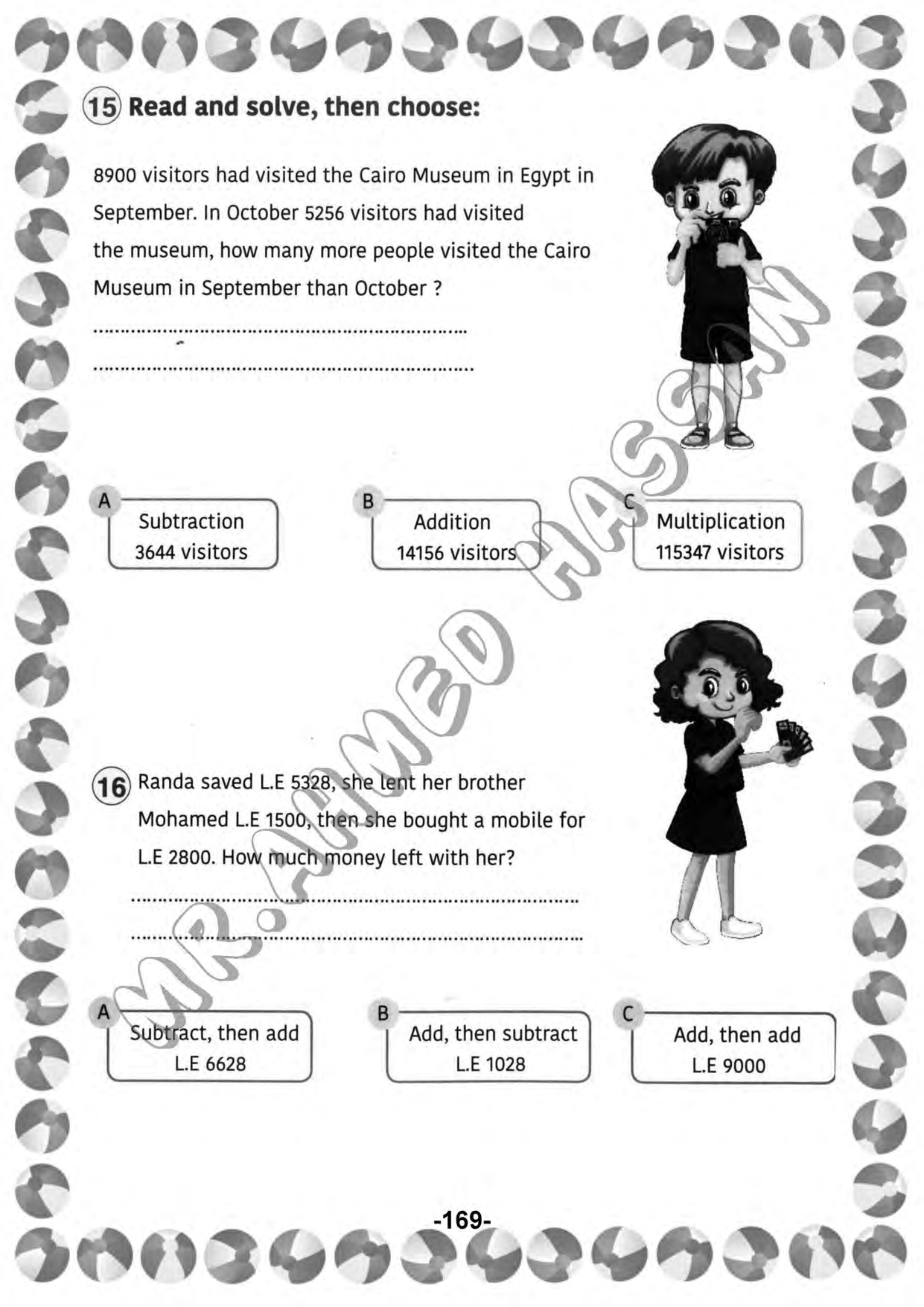
e) $8673 + 1448 = \square$

f) $9759 + 9133 = \square$

g) $3225 + 2649 = \square$

h) $5916 + 1806 = \square$

14 Mr. Mahmoud also raises sheep. One day he took 235 sheep out to graze on a hill. Later, his neighbor brought his sheep to the hillside to graze. Now there are 680 sheep on the hill. How many sheep did the neighbor bring to the hillside?



15 Read and solve, then choose:

8900 visitors had visited the Cairo Museum in Egypt in September. In October 5256 visitors had visited the museum, how many more people visited the Cairo Museum in September than October ?

....

....

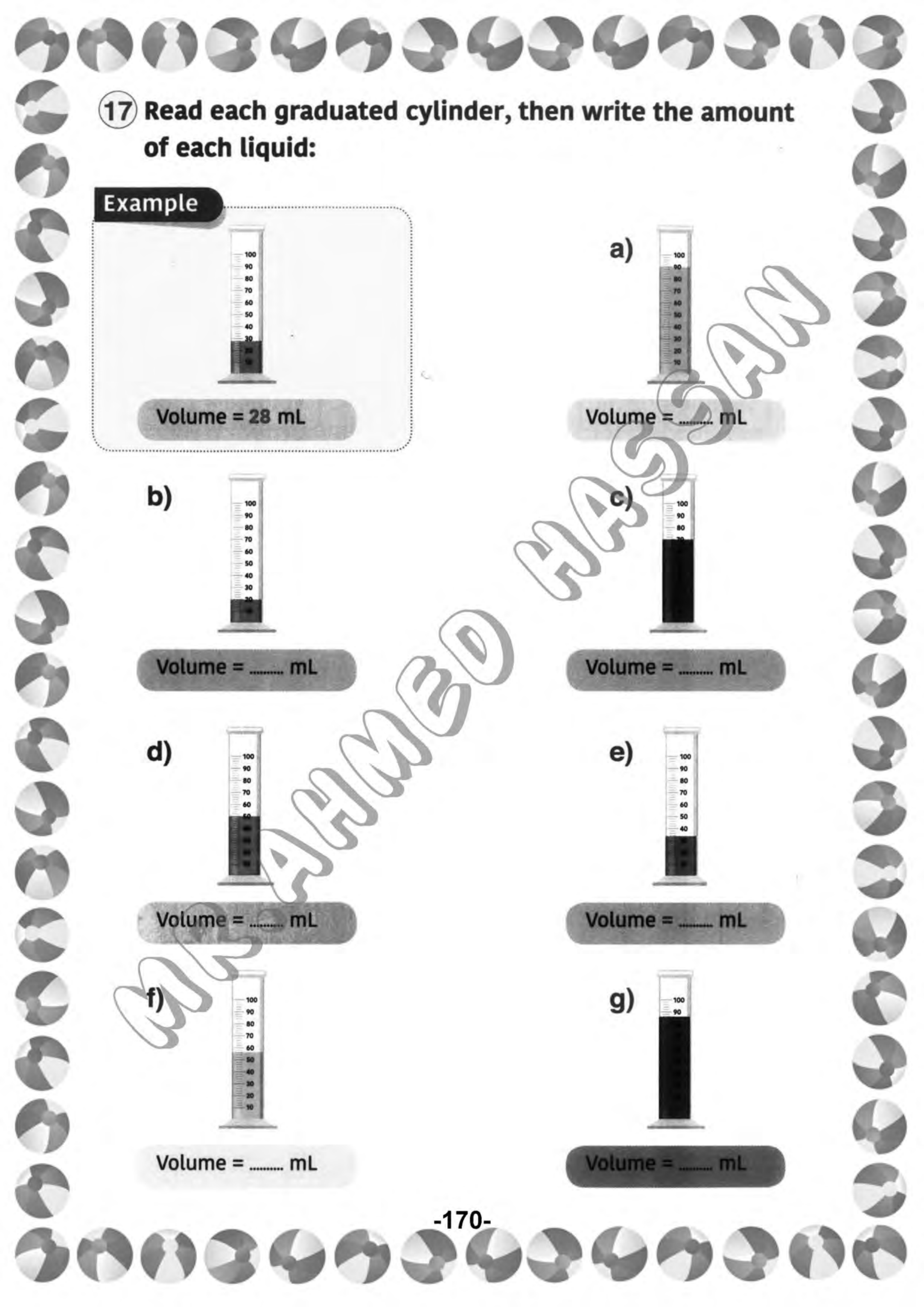
A	B	C
Subtraction 3644 visitors	Addition 14156 visitors	Multiplication 115347 visitors

16 Randa saved L.E 5328, she lent her brother Mohamed L.E 1500, then she bought a mobile for L.E 2800. How much money left with her?

....

....

A	B	C
Subtract, then add L.E 6628	Add, then subtract L.E 1028	Add, then add L.E 9000



17 Read each graduated cylinder, then write the amount of each liquid:

Example

Volume = 28 mL

a) Volume = ... mL

b) Volume = ... mL

c) Volume = ... mL

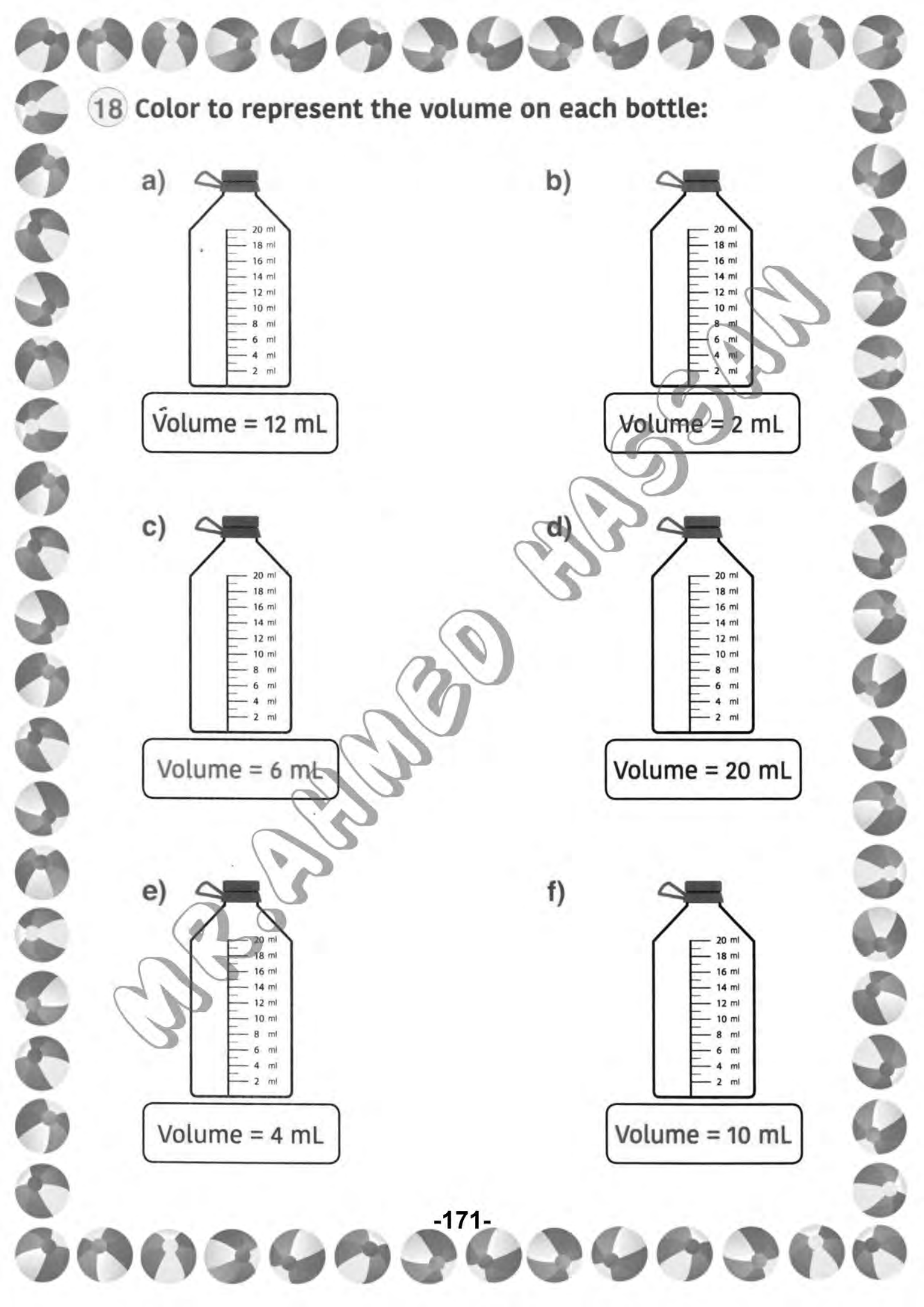
d) Volume = ... mL

e) Volume = ... mL

f) Volume = ... mL

g) Volume = ... mL

18 **Color to represent the volume on each bottle:**



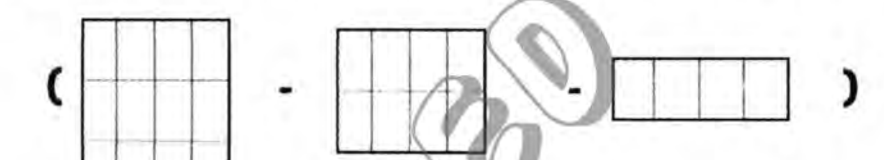
Additional Exercises

1 Complete:

1) If 6 × 9 = 54, then 6 × 90 = ...
2) If 6 × 4 = 24, then 6 × .... = 2400.
3) 7 × 90 = (7 × ....) × 10.
4) (10 + 5) is a multiples of ....
5) If 10 × 6 = 60, then 60 ÷ .... = 10.
6) 8 × .... = 0.
7) .... × .... is a multiple of 9.

2 Choose the correct answer:

1- The figure that represents the array 3 × 4 is



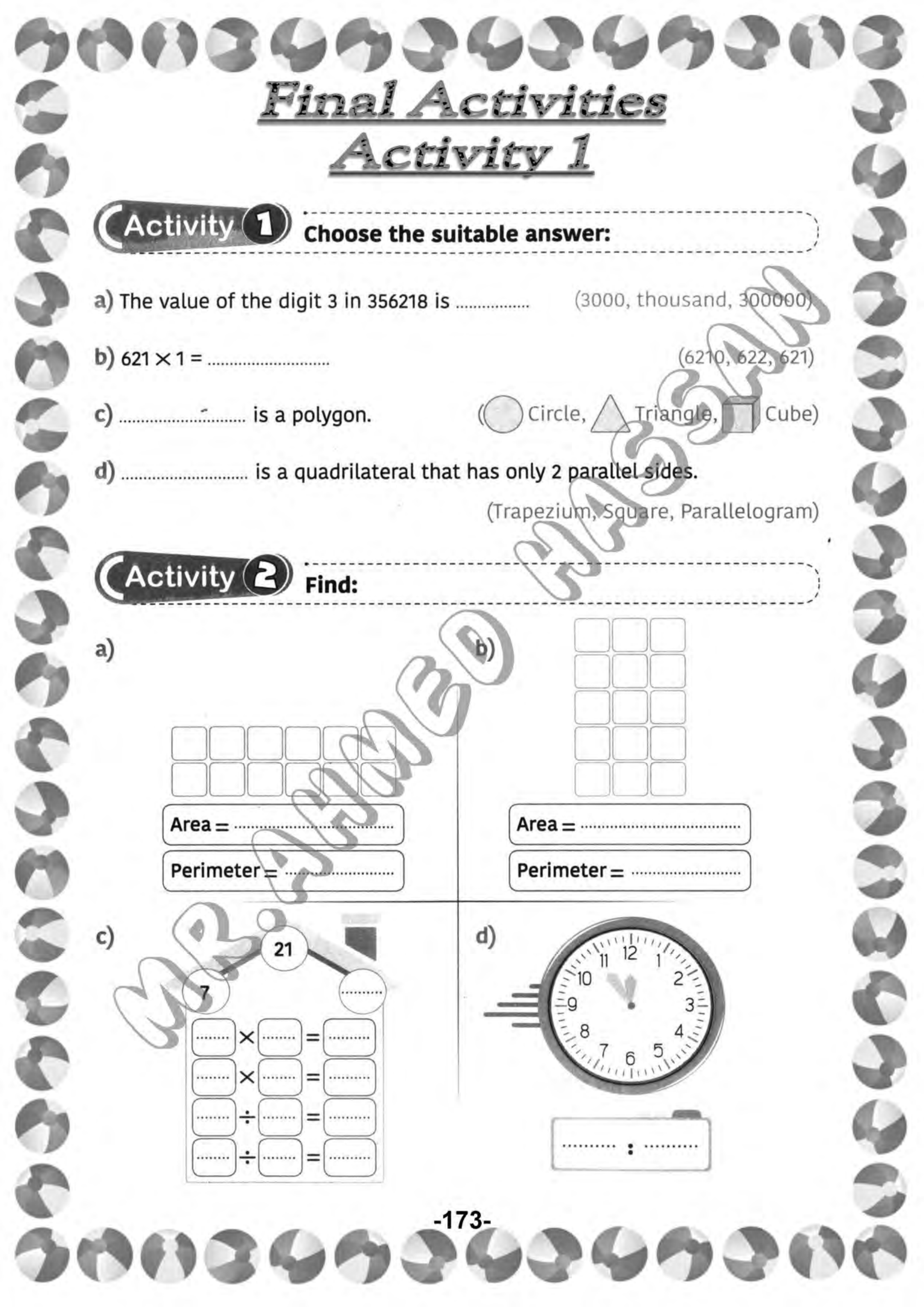
2- The estimated sum of 745 + 217 is (900 - 800 - 1000).

3- The amount of water in a large bucket can be measured in (liters - milliliters - meters).

4- The nearest estimate for the amount of medicine inside ✒ is (3 l - 3 ml - 30 ml).

5- If you know that 600 ml fills 6 cups, then 300 ml fills .... (3 - 4 - 5) cups.

6- 673 is about 700 to the nearest (unit - ten - hundred).



Final Activities
Activity 1

Activity 1 Choose the suitable answer:

a) The value of the digit 3 in 356218 is .... (3000, thousand, 300000)

b) 621 × 1 = ... (6210, 622, 621)

c) .... is a polygon. (Circle, Triangle, Cube)

d) .... is a quadrilateral that has only 2 parallel sides.

(Trapezium, Square, Parallelogram)

Activity 2 Find:

a)

Area = ...

Perimeter = ...

b)

Area = ...

Perimeter = ...

c)

.... × .... = ...

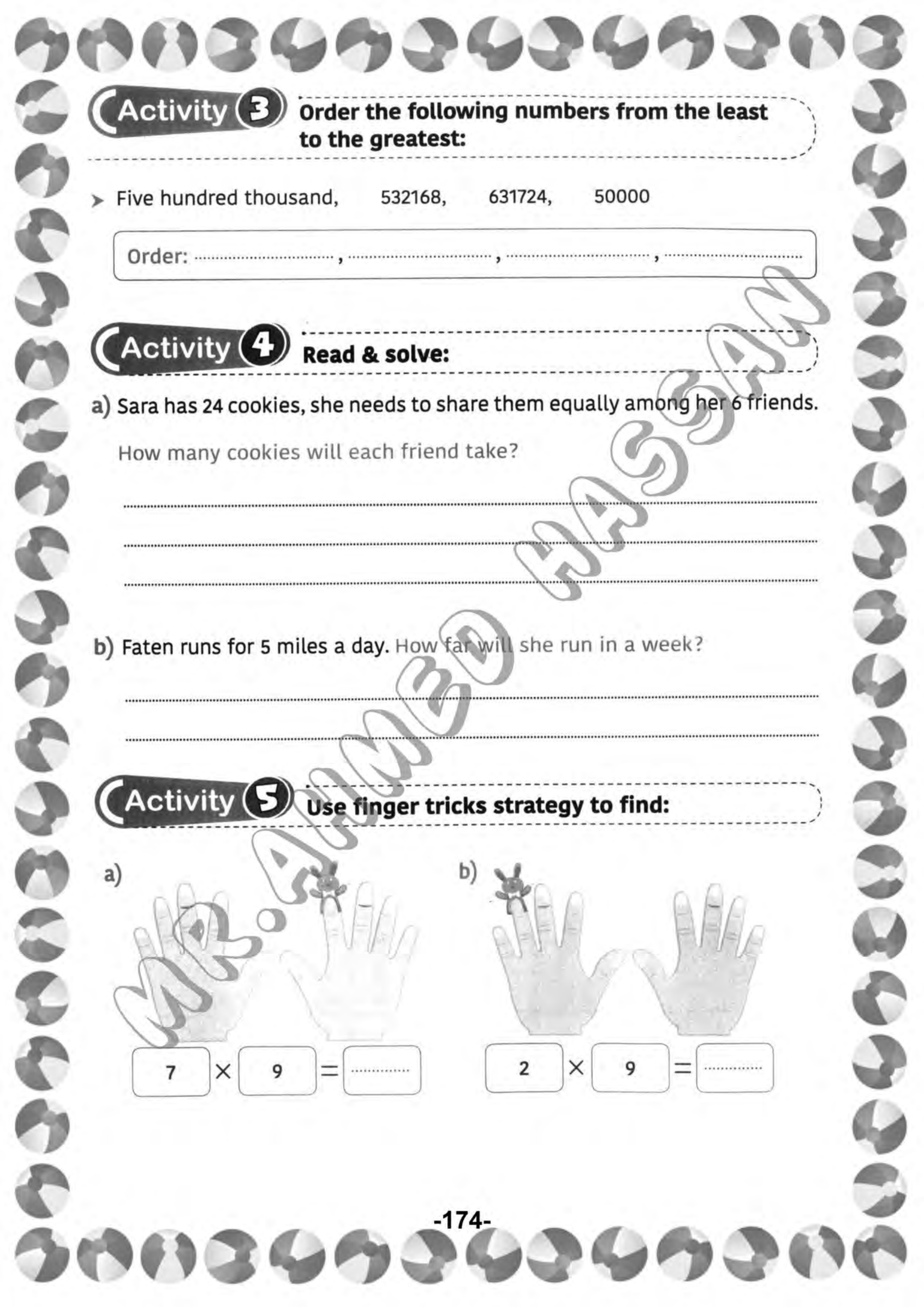
.... × .... = ...

.... ÷ .... = ...

.... ÷ .... = ...

d)

.... : ....



Activity 3 Order the following numbers from the least to the greatest:

- Five hundred thousand, 532168, 631724, 50000

Order: .... , ... , ... , ...

Activity 4 Read & solve:

a) Sara has 24 cookies, she needs to share them equally among her 6 friends.

How many cookies will each friend take?

....

....

....

b) Faten runs for 5 miles a day. How far will she run in a week?

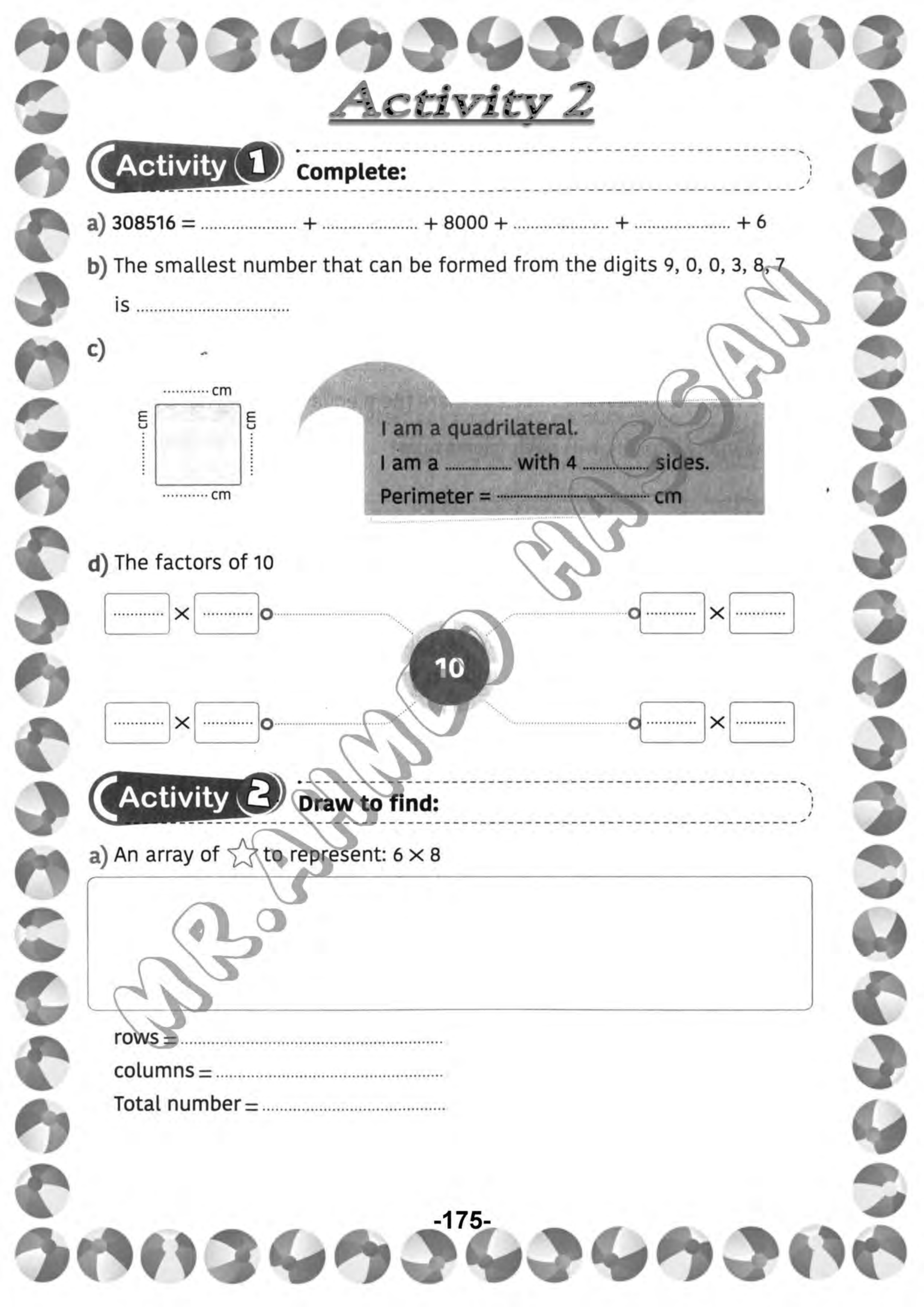
....

....

Activity 5 Use finger tricks strategy to find:

a) 7 × 9 = ...

b) 2 × 9 = ...



Activity 2

Activity 1 Complete:

a) 308516 = ... + ... + 8000 + ... + ... + 6

b) The smallest number that can be formed from the digits 9, 0, 0, 3, 8, 7 is ....

c)

I am a quadrilateral.
I am a .... with 4 .... sides.
Perimeter = ... cm

d) The factors of 10

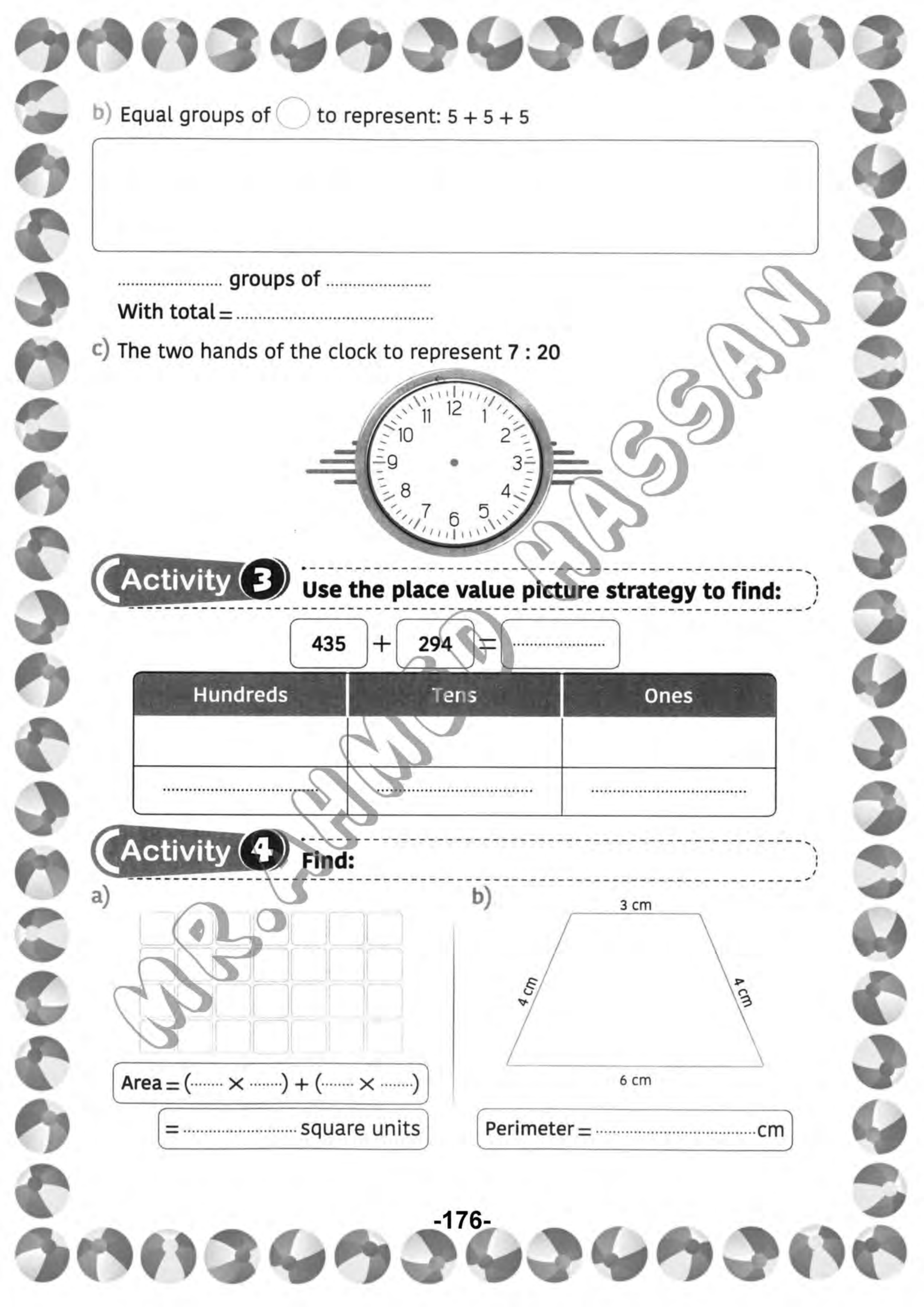
Activity 2 Draw to find:

a) An array of ☆ to represent: 6×8

rows = ...

columns = ...

Total number = ...



b) Equal groups of ◯ to represent: 5 + 5 + 5

.... groups of ....

With total = ...

c) The two hands of the clock to represent **7 : 20**

Activity 3 Use the place value picture strategy to find:

435 + 294 = ...

Hundreds	Tens	Ones
....	....	....

Activity 4 Find:

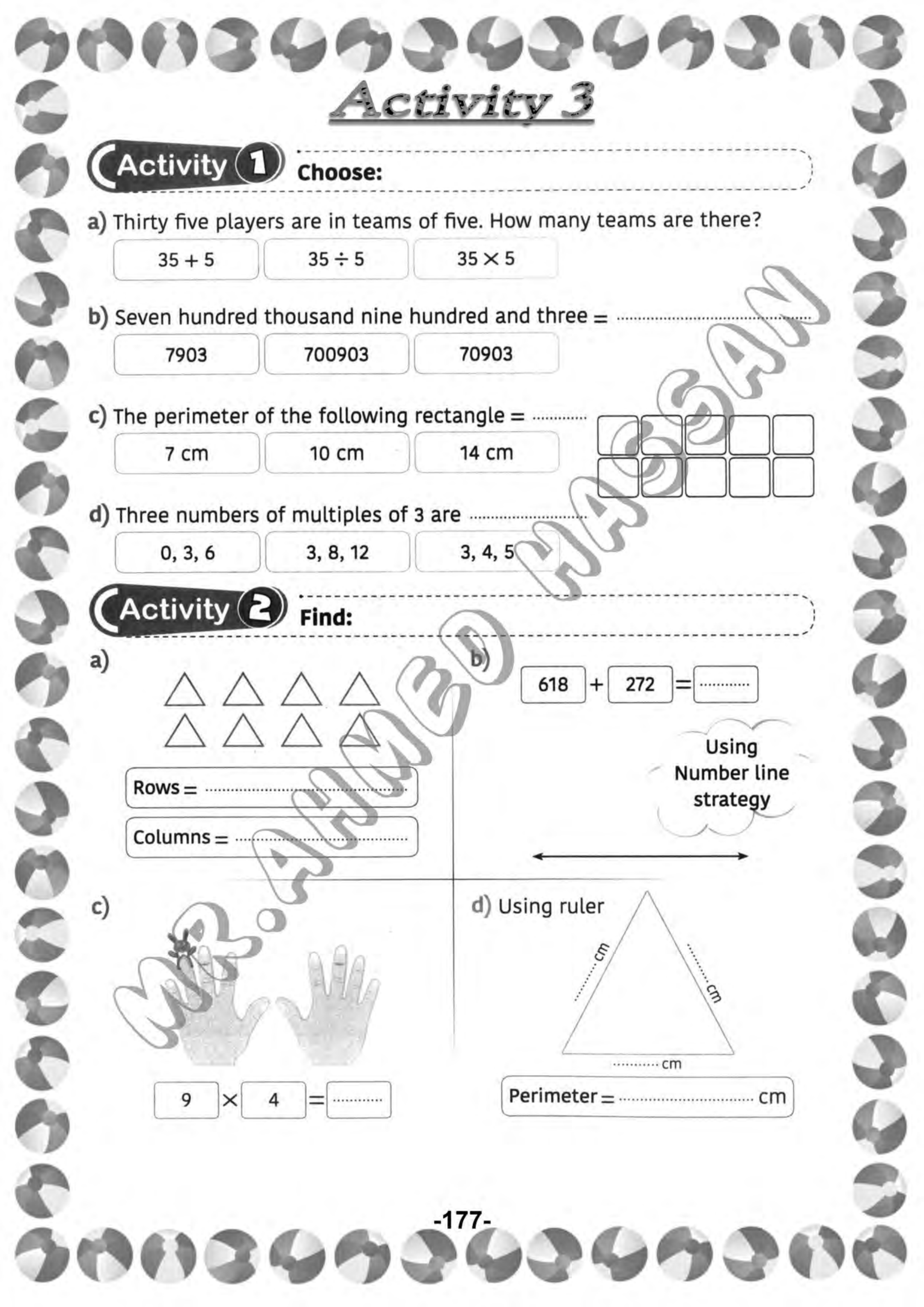
a)

Area = (........ × ....) + (........ × ....)

= .... square units

b)

Perimeter = ... cm



Activity 3

Activity 1 Choose:

a) Thirty five players are in teams of five. How many teams are there?

35 + 5	35 ÷ 5	35 × 5

b) Seven hundred thousand nine hundred and three = ...

7903	700903	70903

c) The perimeter of the following rectangle = ...

7 cm	10 cm	14 cm

d) Three numbers of multiples of 3 are ....

0, 3, 6	3, 8, 12	3, 4, 5

Activity 2 Find:

a)

Rows = ...

Columns = ...

b) 618 + 272 = ...

Using Number line strategy

c) 9 × 4 = ...

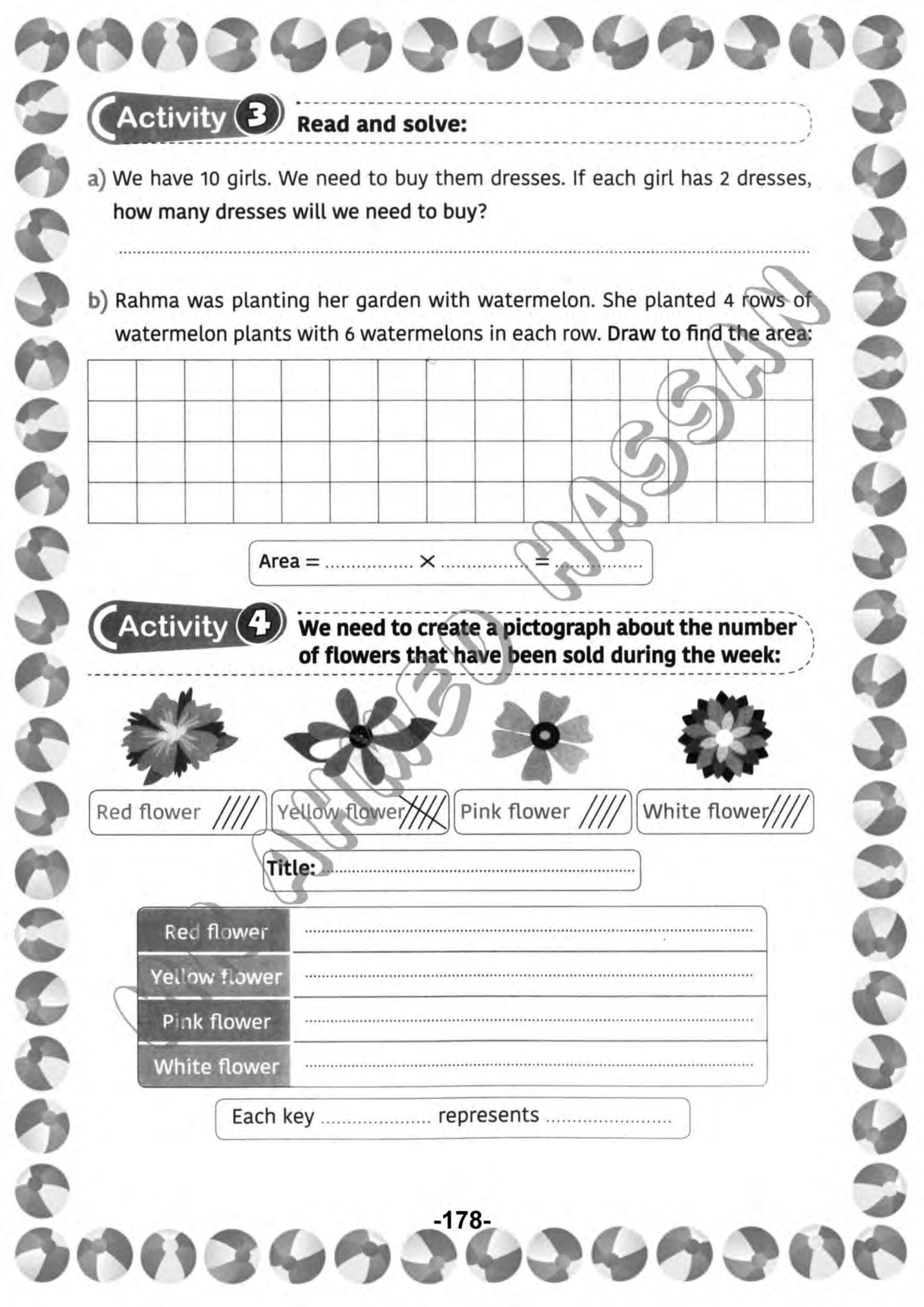
d) Using ruler

.... cm

.... cm

.... cm

Perimeter = ... cm



Activity 3 Read and solve:

a) We have 10 girls. We need to buy them dresses. If each girl has 2 dresses, **how many dresses will we need to buy?**

....

b) Rahma was planting her garden with watermelon. She planted 4 rows of watermelon plants with 6 watermelons in each row. **Draw to find the area:**

Area = ... × .... = ...

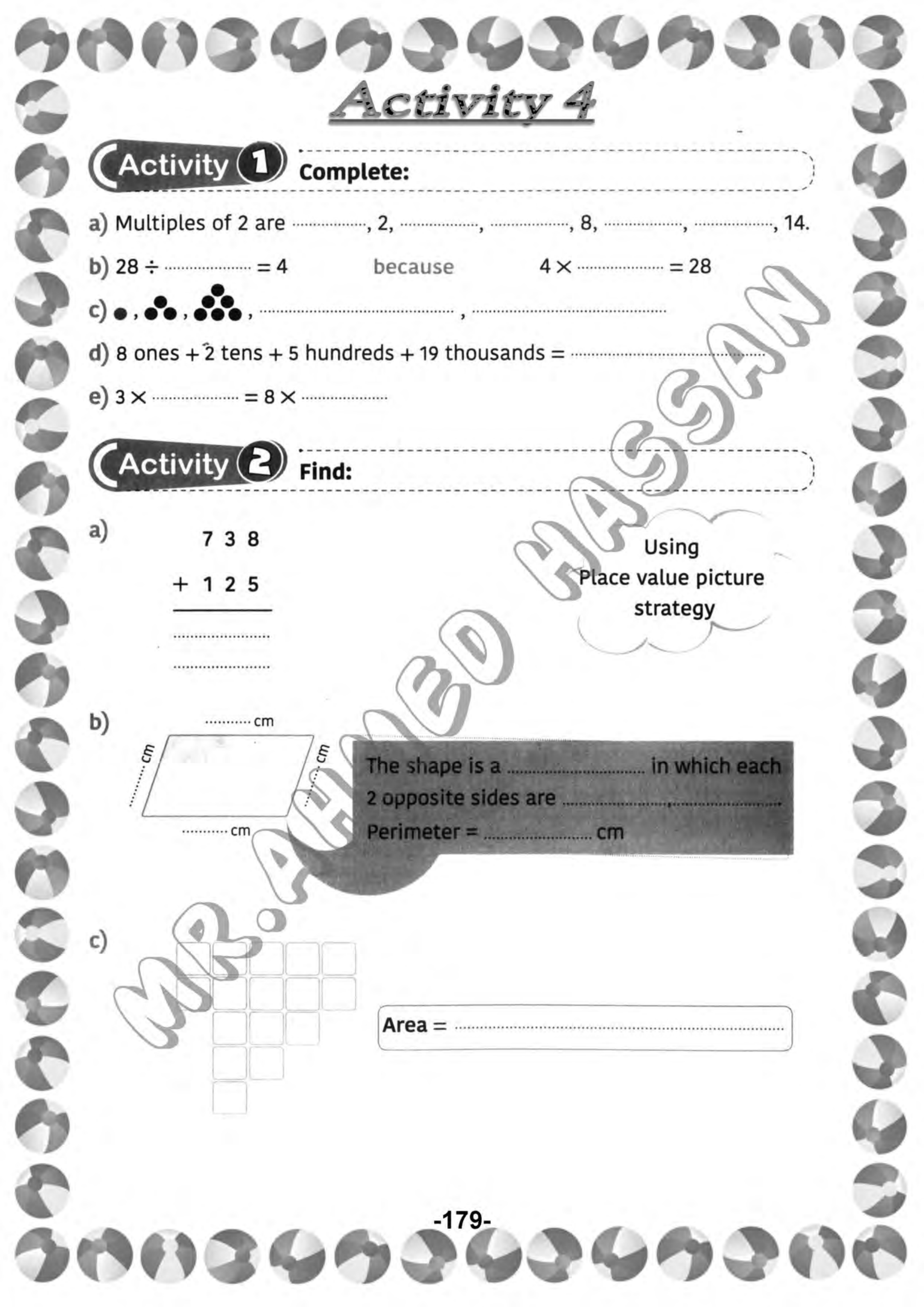
Activity 4 We need to create a pictograph about the number of flowers that have been sold during the week:

Red flower ////	Yellow flower ~~////~~	Pink flower ////	White flower ////

Title: ....

Red flower	....
Yellow flower	....
Pink flower	....
White flower	....

Each key .... represents ....



Activity 4

Activity 1 Complete:

a) Multiples of 2 are ...., 2, ..., ..., 8, ..., ..., 14.

b) 28 ÷ .... = 4 because 4 × .... = 28

c) ● , ●●● , ●●●●●● , ..., ...

d) 8 ones + 2 tens + 5 hundreds + 19 thousands = ...

e) 3 × .... = 8 × ....

Activity 2 Find:

a)

$$\begin{array}{r} 738 \\ +\ 125 \\ \hline \end{array}$$

....

....

Using Place value picture strategy

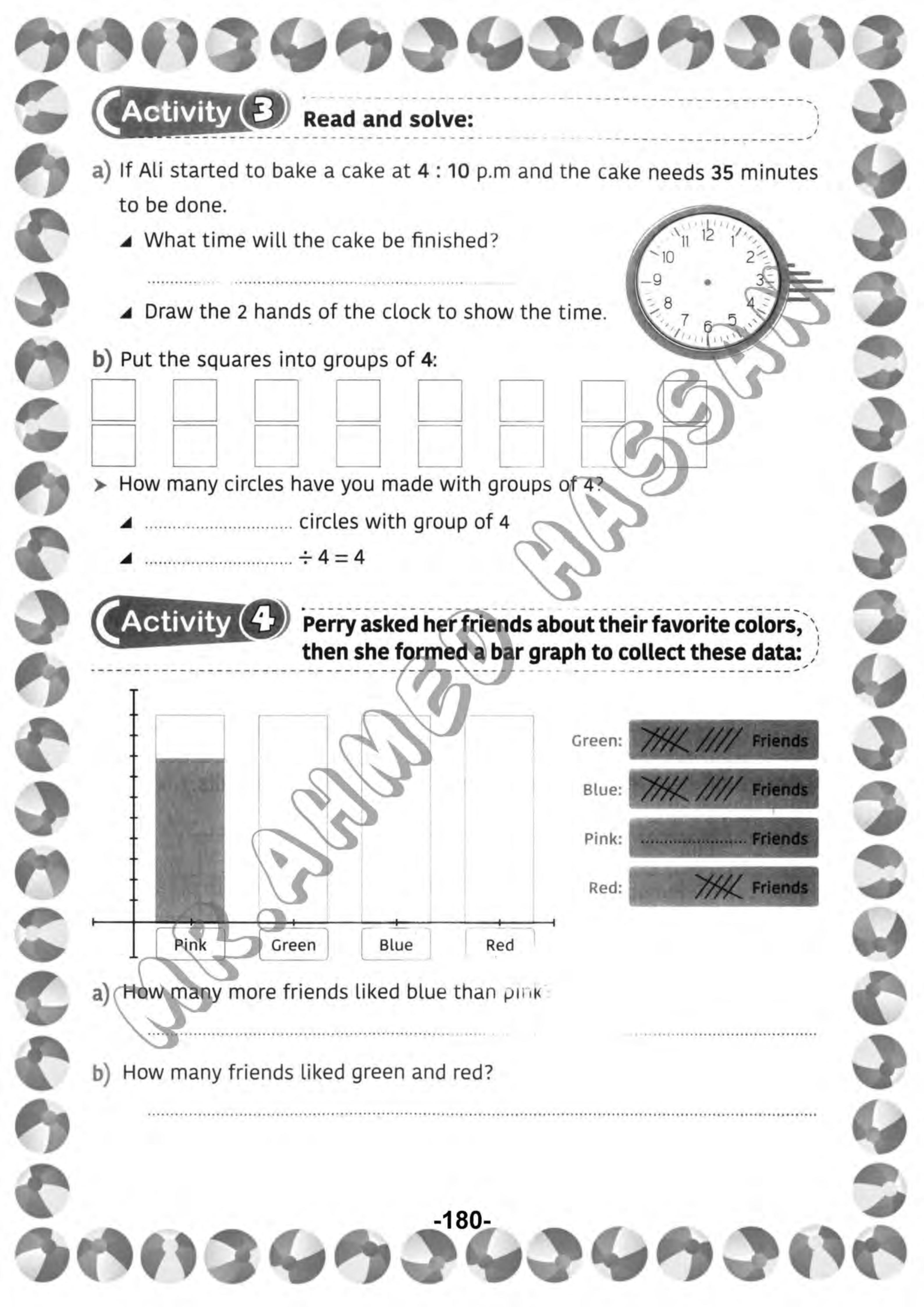
b) .... cm, ... cm, ... cm, ... cm

The shape is a .... in which each 2 opposite sides are ...., ...

Perimeter = ... cm

c)

Area = ...



Activity 3 Read and solve:

a) If Ali started to bake a cake at **4 : 10** p.m and the cake needs **35** minutes to be done.

- What time will the cake be finished?

  ....

- Draw the 2 hands of the clock to show the time.

b) Put the squares into groups of **4**:

- How many circles have you made with groups of 4?
  - .... circles with group of 4
  - .... ÷ 4 = 4

Activity 4 Perry asked her friends about their favorite colors, then she formed a bar graph to collect these data:

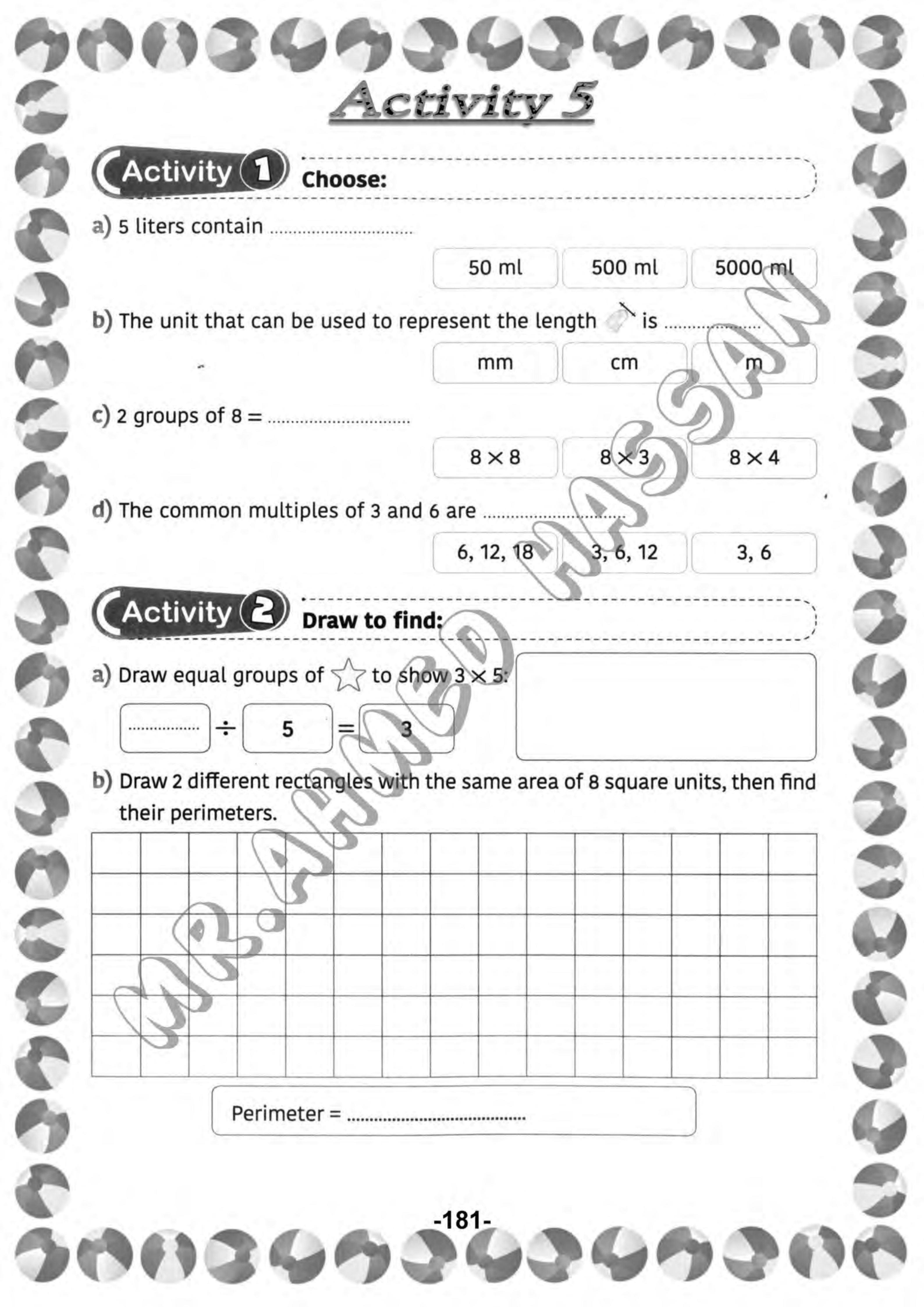
Green:	卌 //// Friends
Blue:	卌 //// Friends
Pink:	.... Friends
Red:	卌 Friends

a) How many more friends liked blue than pink?

....

b) How many friends liked green and red?

....



Activity 5

Activity 1 Choose:

a) 5 liters contain ....

50 ml	500 ml	5000 ml

b) The unit that can be used to represent the length is ....

mm	cm	m

c) 2 groups of 8 = ...

8×8	8×3	8×4

d) The common multiples of 3 and 6 are ....

6, 12, 18	3, 6, 12	3, 6

Activity 2 Draw to find:

a) Draw equal groups of ☆ to show 3×5:

.... ÷ 5 = 3

b) Draw 2 different rectangles with the same area of 8 square units, then find their perimeters.

Perimeter = ...

Activity 3 Read, then solve:

- Amar has 21 balls that need to be divided among his 3 friends.
  Draw the balls to represent the equal sharing:

.... ÷ .... = ...

Activity 4 Order the following numbers from the greatest to the least:

- 6 hundred thousand, 628 319, 6000, 6 hundred thousand 52
- **Order :** ...., ..., ..., ...

Activity 5 The following data table shows the protectorate places in Egypt. Use different strategies to answer the following:

Protectorate places	Area
Ras Mohamed	1850
St. Catherine	5750
Taba	3595

a) What is the total area of St. Cathrine and Taba all together?

....

....

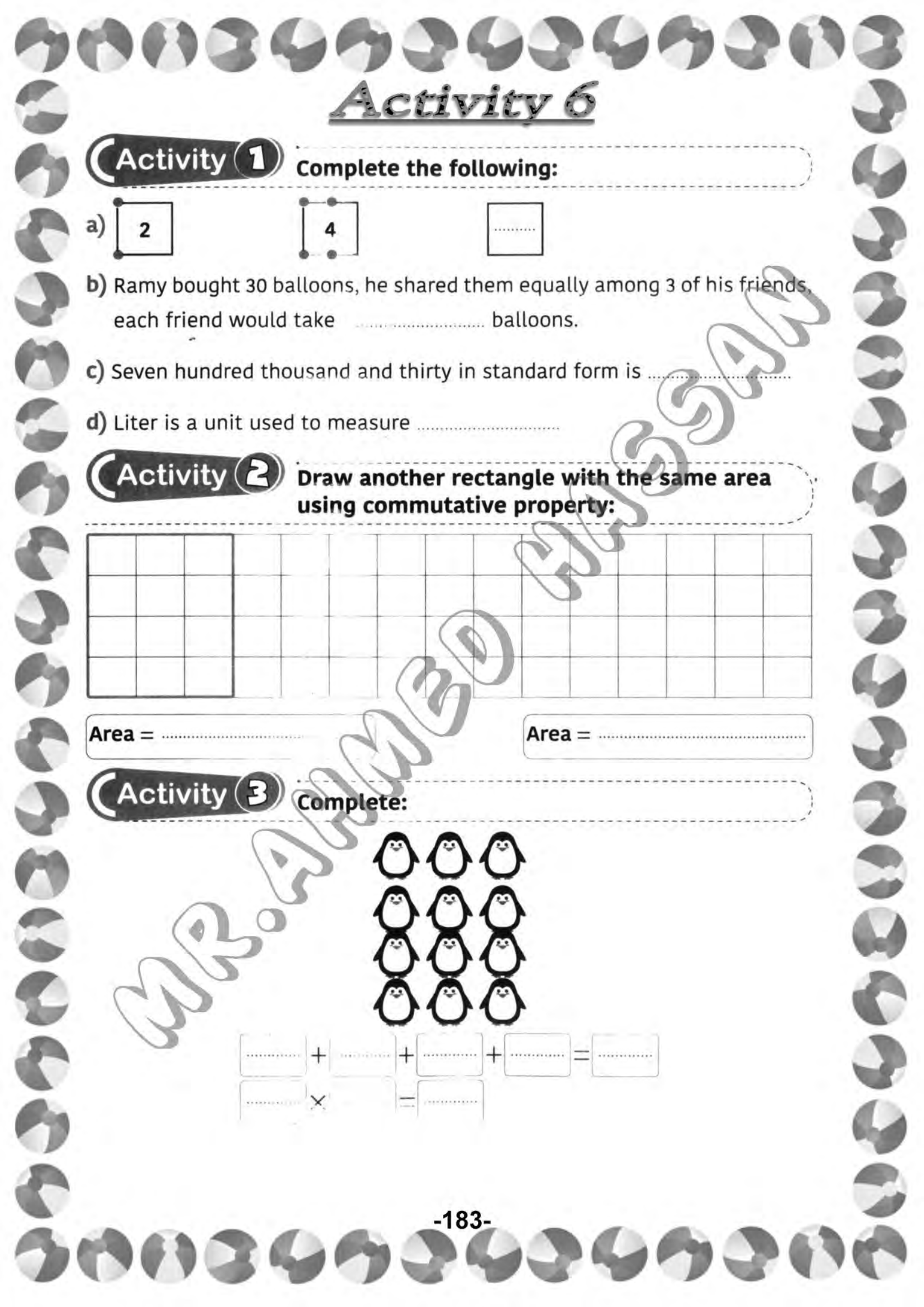
b) What is the total area of Ras Mohamed and Taba?

....

....

c) Order the following protectorate places from the greatest to the least.

Order: ...., ..., ...



Activity 6

Activity 1 Complete the following:

a) 2 4 ....

b) Ramy bought 30 balloons, he shared them equally among 3 of his friends, each friend would take .... balloons.

c) Seven hundred thousand and thirty in standard form is ....

d) Liter is a unit used to measure ....

Activity 2 Draw another rectangle with the same area using commutative property:

Area = ...

Area = ...

Activity 3 Complete:

.... + ... + ... + ... = ...

.... × .... = ...

Activity 4 Read, then solve:

- Write the word form of the number 9037, then find the value and the place value of the number 3:

a) Word form = ...

b) The value of 3 is ....

c) The place value of 3 is..

Activity 5 Find the perimeter, then tick (✓) the largest perimeter:

a) rectangle (A)

Perimeter = ... cm

b) rectangle (B)

Perimeter = ... cm

Activity 6 The following table shows the weights of some vehicles:

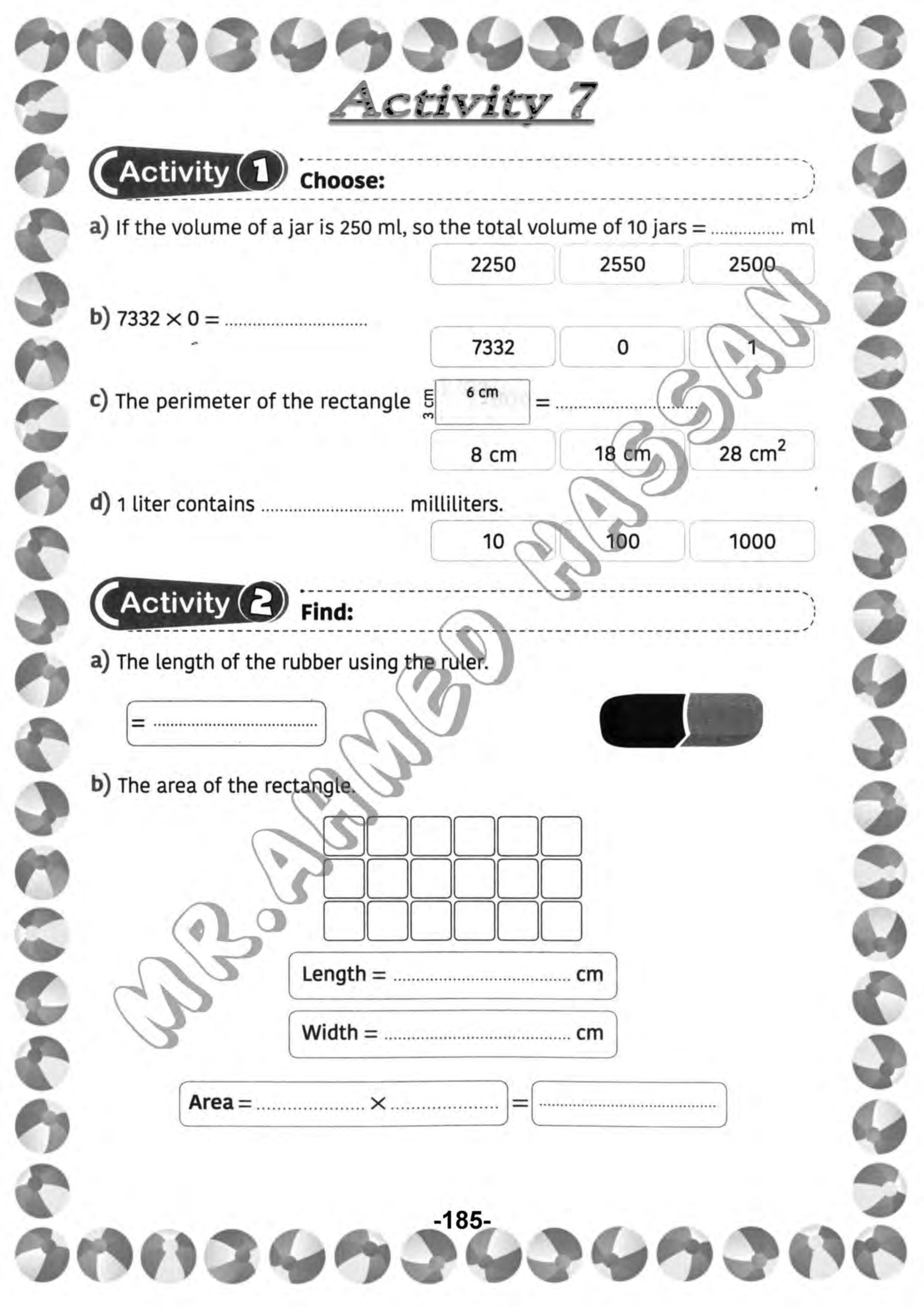
Vehicles	Weights
Car	2810 kgm
Truck	6100 kgm
Motorcycle	1344 kgm

a) How many more kgms does the truck weigh than the motorcycle? .... kgm

b) What is the weight of the truck and the car together? ....

c) Order the vehicles according to their weights from the least to the greatest.

Order: .... , ... , ...



Activity 7

Activity 1 Choose:

a) If the volume of a jar is 250 ml, so the total volume of 10 jars = ... ml

2250	2550	2500

b) $7332 \times 0 =$ ....

7332	0	1

c) The perimeter of the rectangle (6 cm, 3 cm) = ...

8 cm	18 cm	28 cm^2

d) 1 liter contains .... milliliters.

10	100	1000

Activity 2 Find:

a) The length of the rubber using the ruler.

= ....

b) The area of the rectangle.

Length = ... cm

Width = ... cm

Area = ... × .... = ...

Activity 3 Solve the equations:

.... × .... = ...

.... ÷ ....

Activity 4 Read and solve:

- Khaled's field has 9 rows of watermelons, each row contains 5 watermelons. How many watermelon plants does he have?

....

....

Activity 5 Record the data about the lengths of pencil case tools, then represent them on a line plot:

14 cm

9 cm

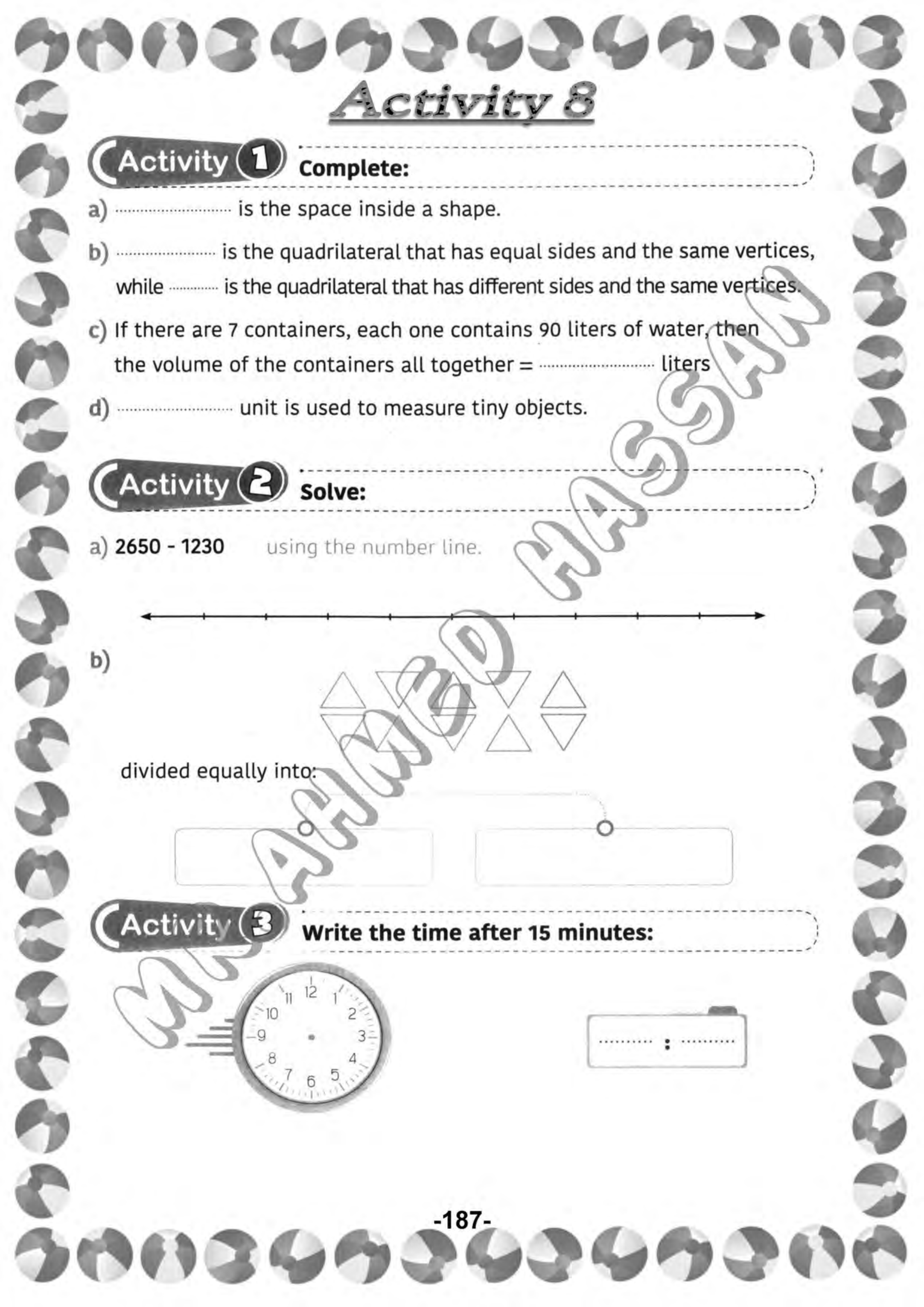
10 cm

10 cm

9 cm

in cm	in mm
14 cm	.... mm
9 cm	.... mm
10 cm	.... mm
10 cm	.... mm

Key = ...



Activity 8

Activity 1 Complete:

a) .... is the space inside a shape.

b) .... is the quadrilateral that has equal sides and the same vertices, while .... is the quadrilateral that has different sides and the same vertices.

c) If there are 7 containers, each one contains 90 liters of water, then the volume of the containers all together = ... liters

d) .... unit is used to measure tiny objects.

Activity 2 Solve:

a) **2650 - 1230** using the number line.

b)

divided equally into:

Activity 3 Write the time after 15 minutes:

Activity 4 Find the missing number on the place value mat:

Thousand	Hundred	Tens	Ones
....	....		....
3	4	....	8

Activity 5 Write the following numbers as required:

a) **807, 317** (word form): ....

....

b) Sixty nine thousand, four hundred and one (standard form) = ...

....

Activity 6 Read, then solve:

- A library contains 4270 books, its sales in the last six months were 2100 books. How many books left in the library?

....

....

....

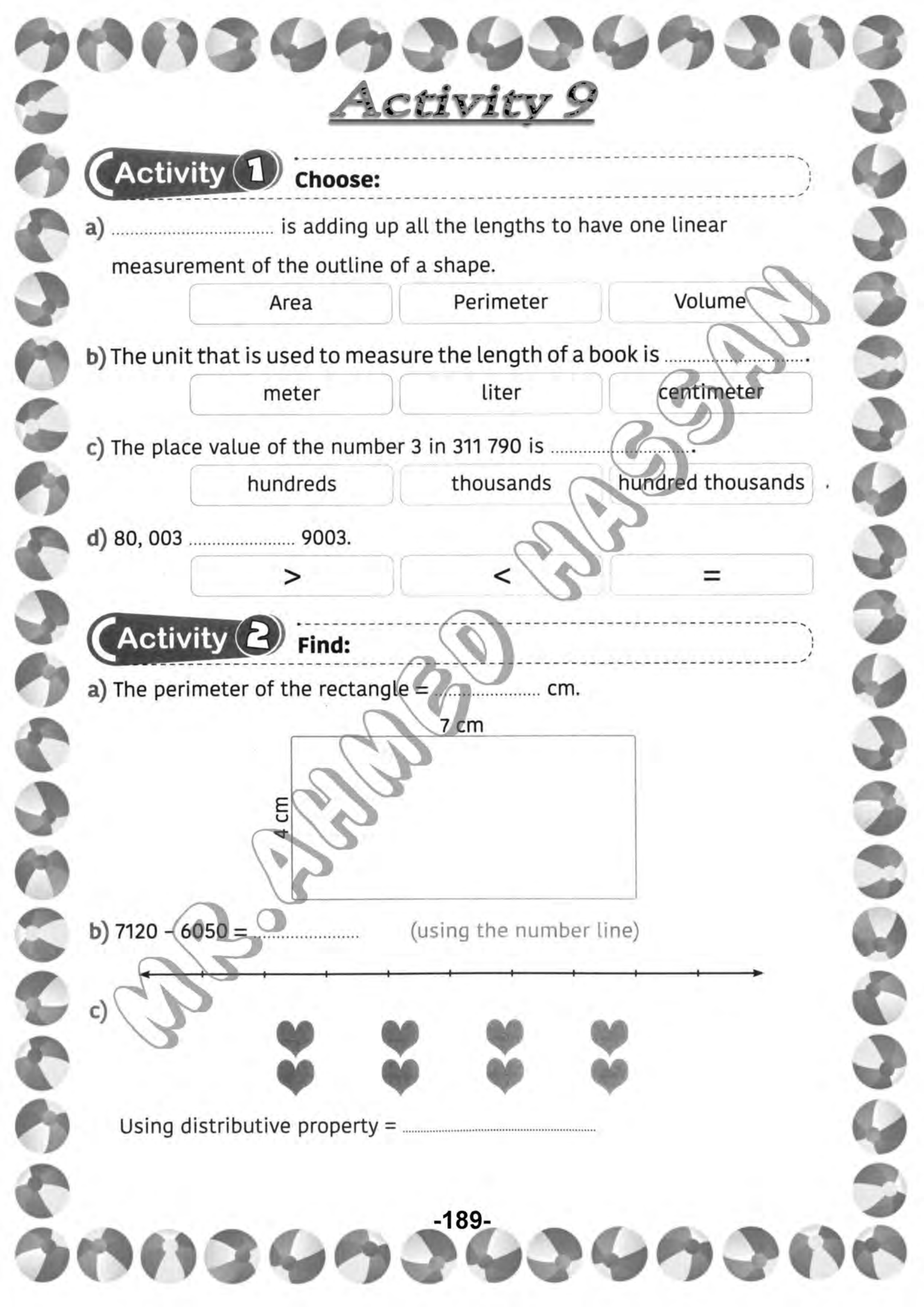
Activity 7 Find:

- 511 + 302 (using the place value picture)

....

....

....



Activity 9

Activity 1 Choose:

a) .... is adding up all the lengths to have one linear measurement of the outline of a shape.

Area	Perimeter	Volume

b) The unit that is used to measure the length of a book is ....

meter	liter	centimeter

c) The place value of the number 3 in 311 790 is ....

hundreds	thousands	hundred thousands

d) 80, 003 .... 9003.

>	<	=

Activity 2 Find:

a) The perimeter of the rectangle = ... cm.

b) 7120 – 6050 = ... (using the number line)

c)

Using distributive property = ...

d)

Time = ... : ....

or Quarter to ....

Activity 3

Color the figure to complete the pattern, then find the area.

The area = ... × .... = ...

Activity 4

Teddy's Food Factory exports jars of jam. The pictograph shows the number of jars exported each day. Use the information from the graph to answer the questions:

Jam jars exported	
Day	**The number of jam jars**
Monday	
Tuesday	
Wednesday	
Thursday	

Key : Each jar represents 10

a) Which of the two days did they export fewer jars of jam?

....

b) How many more jars of jam were exported on Thursday than Monday?

....

Activity 10

Activity 1 Choose:

a) Four hundred thousand, two hundred and forty is ....

40250	400 + 50 + 2	400240

b) .... is a polygon in which each 2 opposite sides are parallel.

c) We can measure the length of a table by ....

centimeter	meter	millimeter

d) If we divided 1 liter of juice among 10 cups, so each cup would contain .... ml.

10	100	1000

Activity 2 Find:

The rectangle which has the largest perimeter and the smallest area.

rectangle (A)

rectangle (B)

Perimeter = ...

Perimeter = ...

The largest perimeter is ....

The smallest area is ....

Activity 3 Draw using ◯ to represent:

7	+	7	+	7

7	×	....	=	....

Activity 4 Find:

a) 4 cm, 3 cm, 5 cm

The name of the quadrilateral is .... cm

Perimeter = ... cm

b) Write the number 101001 in word and expanded forms.

◢ Word form: .... ◢ Expanded form: ....

Activity 5 The following data show some of students' favorite musical instruments:

Guitar	Piano	Drum	Flute
𝍸	𝍸 𝍸	IIII	𝍸 𝍸 II

Title: ....

Label: ....

Label: ....

Represent the data, then answer:

a) Circle the scale you have used: (2 , 4 , 5 , 10).

b) Which instrument is the most favorite?

....

c) Which instrument is the least favorite?

....